



**CSD-TD51**

U(S),K(S),EZ(S)

**CSD-TD52**

U(W)

**CSD-TD53**

U(L)



# SERVICE MANUAL

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COMPACT DISC RADIO  
CASSETTE RECORDER

- BASIC TAPE MECHANISM : TN-21ZVC-2000
  - BASIC CD MECHANISM : DA11T3C
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This Service Manual is the "Revision Publishing" and replaces "Simple Manual"  
CSD-TD51 U(S)/TD52 U(W)/TD53 U(L)(S/M Code No. 09-003-343-3T1)  
CSD-TD51 EZ(S),K(S)(S/M Code No. 09-003-343-3T2).

**aiwa**  
S/M Code No. 09-003-343-3R1

REVISION  
DATA

## SPECIFICATIONS

### U MODEL

#### Tuner section

Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna,  
AM: 530/531 - 1,710/1,602 kHz (10/9 kHz step) Ferrite bar antenna

#### Deck section

Track format — 4 tracks, 2 channels / Frequency range — Normal tape:  
50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system —  
Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

#### CD player section

Disc — Compact disc / Scanning method — Non-contact optical scanner  
(semiconductor laser)

#### General

Speaker — 80 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms DC) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 120 V, 60 Hz / Power consumption — 15 W  
Dimensions (W x H x D) — 302 x 162 x 253 mm (12 x 6½ x 10 in.)  
Weight (excluding batteries) — 2.7 kg (5 lbs. 15 oz.)

### EZ MODEL

#### Tuner section

Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna,  
MW: 531/530 - 1,602/1,710 kHz (9/10 kHz step) Ferrite bar antenna,  
LW: 153 - 288 kHz Ferrite bar antenna

#### Deck section

Track format — 4 tracks, 2 channels / Frequency range — Normal tape:  
50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system —  
Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

#### CD player section

Disc — Compact disc / Scanning method — Non-contact optical scanner  
(semiconductor laser)

#### General

Speaker — 80 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.9 W + 2.9 W (DIN MUSIC POWER), 2.5 W + 2.5 W (EIAJ 7 ohms DC), 1.9 W + 1.9 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 230 V, 50 Hz / Power consumption — 14 W  
Dimensions (W x H x D) — 302 x 162 x 253 mm  
Weight (excluding batteries) — 2.7 kg

- Design and specifications are subject to change without notice.

- Design and specifications are subject to change without notice.

### K MODEL

#### Tuner section

Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna,  
MW: 531/530 - 1,602/1,710 kHz (9/10 kHz/step) Ferrite bar antenna,  
LW: 153 - 288 kHz Ferrite bar antenna

#### Deck section

Track format — 4 tracks, 2 channels / Frequency range — Normal tape:  
50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system —  
Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

#### CD player section

Disc — Compact disc / Scanning method — Non-contact optical scanner  
(semiconductor laser)

#### General

Speaker — 80 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms DC), 1.9 W + 1.9 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 230 V, 50 Hz / Power consumption — 14 W  
Dimensions (W x H x D) — 302 x 162 x 253 mm  
Weight (excluding batteries) — 2.7 kg

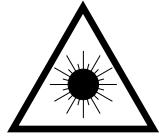
- Design and specifications are subject to change without notice.

## PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

### WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

### VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käytöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylit-täälle näkymättömälle lasersäteilylle.

### VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskriber gränsen för laserklass 1.

### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### ATTENTION

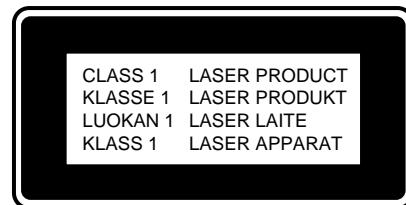
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

### ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

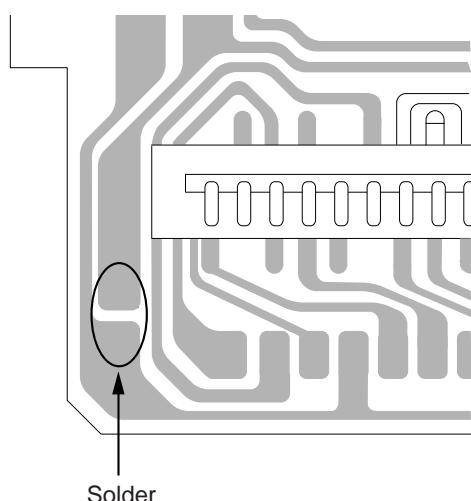


### Precaution to replace Optical block

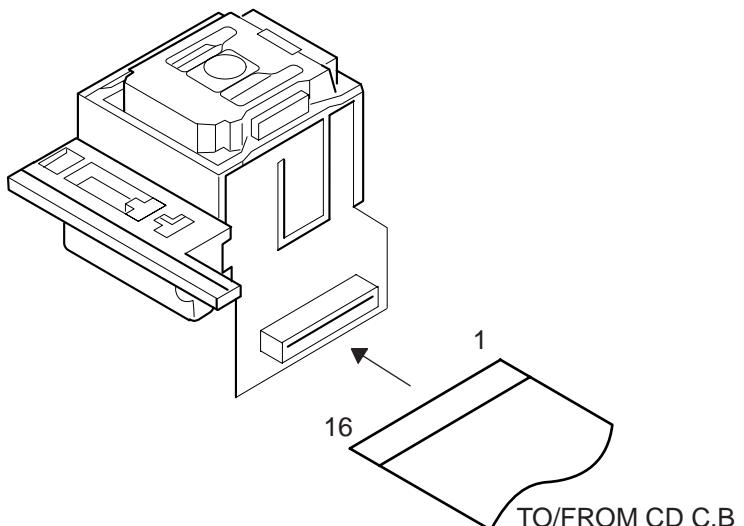
#### (SF-P101NR)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in the right figure.



PICK UP ASSY  
SF-P101NR



## ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C317	87-010-197-080	CAP, CHIP 0.01 DM	
87-A21-550-010	IC,TA2149N			C801	87-010-248-080	CAP, ELECT 220-10V	
87-A21-185-040	C-IC,LC72121M			C805	87-012-365-080	C-CAP,S 0.027-25V BK	
87-A21-064-010	IC,LA4227			C806	87-012-365-080	C-CAP,S 0.027-25V BK	
87-A21-520-040	C-IC,M61509FP			C807	87-010-405-080	CAP, ELECT 10-50V	
87-A20-446-010	C-IC,LA9241ML			C808	87-010-405-080	CAP, ELECT 10-50V	
87-A20-459-010	C-IC,LC78622ED			C809	87-010-401-080	CAP, ELECT 1-50V	
87-A21-093-010	IC,LA6541D			C810	87-010-401-080	CAP, ELECT 1-50V	
8A-CH4-661-010	C-IC,LC867132V-5P07			C811	87-010-178-080	CHIP CAP 1000P	
87-A21-431-010	IC,BA4560N			C812	87-010-178-080	CHIP CAP 1000P	
TRANSISTOR				C816	87-010-180-080	C-CER 1500P	
89-327-143-080	TR,2SC2714 (0.1W)			C817	87-010-180-080	C-CER 1500P	
87-026-447-080	TR,2SC1740S R			C821	87-010-401-080	CAP, ELECT 1-50V	
89-111-624-080	TR,2SA1162Y			C822	87-010-401-080	CAP, ELECT 1-50V	
87-026-213-080	CHIP-TR,DTC114YK			C823	87-010-178-080	CHIP CAP 1000P	
89-503-025-010	C-FET,2SK302GR<51 K<S>,51 EZ<S>			C824	87-010-178-080	CHIP CAP 1000P	
89-320-011-080	TR,2SC2001 (15W)<51 K<S>,51 EZ<S>			C829	87-010-178-080	CHIP CAP 1000P	
87-026-230-080	CHIP-TR,DTA114YK<51 K<S>,51 EZ<S>			C830	87-010-178-080	CHIP CAP 1000P	
89-327-125-080	CHIP TR,2SC2712GR			C833	87-018-195-080	CAP, CER 1200P-16V	
89-112-965-080	TR,2SA1296 (0.75W)			C834	87-010-248-080	CAP, ELECT 220-10V	
87-026-463-080	TR,2SA933S (0.3W)			C835	87-010-322-080	C-CAP,S 100P-50 CH	
87-026-291-080	TR,DTC124XS			C836	87-010-322-080	C-CAP,S 100P-50 CH	
89-213-702-080	TR,2SB1370E			C843	87-010-197-080	CAP, CHIP 0.01 DM	
87-026-462-080	TR,2SC1740 S(RS 0.3W)			C844	87-018-124-080	CAP, CER 270P-50V	
89-318-154-080	TR,2SC1815 (0.4W)			C845	87-010-178-080	CHIP CAP 1000P	
89-109-332-380	TR,2SA933RS			C846	87-010-263-080	CAP, ELECT 100-10V	
89-113-187-080	TR,2SA1318TU			C851	87-010-186-080	CAP, CHIP 4700P	
87-026-295-080	TR,DTC144TK			C852	87-010-178-080	CHIP CAP 1000P	
87-026-237-080	CHIP-TR,DTC124XK			C853	87-018-211-080	CAP, CER 0.01-50	
87-026-239-080	TR,DTC114TK (0.2W)			CN201	87-099-018-010	CONN,16P	
87-026-464-080	TR,DTC114TS (0.3W)			CN801	87-A60-110-010	CONN,4P V S2M-4W	
				CNA302	8A-CD9-629-010	CONN ASSY,6P MA-TU	
				CNA801	8A-CD9-630-010	CONN ASSY, 4P RPH	
				L801	87-007-342-010	COIL,OSC 85K BIAS	
				SW801	8Z-CD9-609-010	SW,SL 1-6-2 PS62D01	
DIODE				CD C.B			
87-070-345-080	DIODE,IN4148			C30	87-010-260-080	CAP, ELECT 47-25V	
87-A40-616-070	VARI-CAP,SVC384(S/T)			C251	87-010-404-080	CAP, ELECT 4.7-50V	
87-A40-128-080	C-VARI-CAP,HVU202A			C261	87-010-402-080	CAP, ELECT 2.2-50V	
87-017-072-080	ZENER,HZS3B1			C262	87-010-402-080	CAP, ELECT 2.2-50V	
87-027-399-080	ZENER,HZ7A3L (200MA)<51 U<S>,53 U<L>,52 U<W>			C263	87-010-178-080	CHIP CAP 1000P	
87-027-607-080	ZENER,HZ7B3L<51 K<S>,51 EZ<S>			C264	87-010-178-080	CHIP CAP 1000P	
87-A40-648-080	ZENER,MTZJ8.2A			C265	87-010-263-080	CAP, ELECT 100-10V	
87-017-978-080	DIODE,1N4003			C266	87-010-263-080	CAP, ELECT 100-10V	
87-020-465-080	DIODE,1SS133 (110MA)			C267	87-010-112-080	CAP, ELECT 100-16V	
87-027-702-080	DIODE,ZENER HZ6C2L (200MA)			C268	87-010-112-080	CAP, ELECT 100-16V	
87-A40-465-010	DIODE,FR202			C271	87-010-237-080	CAP, ELECT 1000-16V	
				C272	87-010-237-080	CAP, ELECT 1000-16V	
				C278	87-010-405-080	CAP, ELECT 10-50V	
				C279	87-010-385-080	CAP, ELECT 220-25V	
				C301	87-016-495-000	CAP,E 3300-25 M SMG	
MAIN C.B				C306	87-010-404-080	CAP, ELECT 4.7-50V	
C211	87-A11-603-080	CAP, S 0.05-16		C307	87-010-401-080	CAP, ELECT 1-50V	
C212	87-A11-603-080	CAP, S 0.15-16		C308	87-010-221-080	CAP, ELECT 470-10V	
C215	87-016-460-080	C-CAP,S 0.22-16 B		C311	87-010-263-080	CAP, ELECT 10-10V	
C216	87-016-460-080	C-CAP,S 0.22-16 B		C312	87-010-385-080	CAP, ELECT 220-25V	
C231	87-010-213-080	C-CAP,S 0.015-50 B		C321	87-010-197-080	CAP, CHIP 0.01 DM	
C232	87-010-213-080	C-CAP,S 0.015-50 B		C322	87-010-263-080	CAP, ELECT 100-10V	
C233	87-A10-201-080	C-CAP,S 0.33-16 KB		C325	87-010-405-080	CAP, ELECT 10-50V	
C234	87-A10-201-080	C-CAP,S 0.33-16 KB		C401	87-010-403-080	CAP, ELECT 3.3-50V	
C235	87-016-669-080	C-CAP,S 0.1-25 K B		C402	87-010-197-080	CAP, CHIP 0.01 DM	
C236	87-016-669-080	C-CAP,S 0.1-25 K B		C403	87-010-263-080	CAP, ELECT 100-10V	
C237	87-010-371-080	CAP, ELECT 470-50V		C404	87-010-248-080	CAP, ELECT 220-10V	
C239	87-010-197-080	CAP, CHIP 0.01 DM		C405	87-010-197-080	CAP, CHIP 0.01 DM	
C240	87-010-197-080	CAP, CHIP 0.01 DM		C406	87-010-374-080	CAP, ELECT 47-10V	
C247	87-010-401-080	CAP, ELECT 1-50V		C407	87-010-178-080	CHIP CAP 1000P	
C248	87-010-401-080	CAP, ELECT 1-50V		C408	87-010-198-080	CAP, CHIP 0.022	
C310	87-010-248-080	CAP, ELECT 220-10V		C409	87-010-248-080	CAP, ELECT 220-10V	
C316	87-010-263-080	CAP,E 100-10					

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C410	87-010-263-080	CAP, ELECT 100-10V		C503	87-010-322-080	C-CAP,S 100P-50 CH	
C411	87-A11-177-080	C-CAP,S 0.15-16 K B		C504	87-010-322-080	C-CAP,S 100P-50 CH	
C412	87-010-401-080	CAP, ELECT 1-50V		C505	87-010-322-080	C-CAP,S 100P-50 CH	
C413	87-016-369-080	C-CAP,S 0.033-25 B K		C506	87-010-322-080	C-CAP,S 100P-50 CH	
C414	87-010-405-080	CAP, ELECT 10-50V		C510	87-016-669-080	C-CAP,S 0.1-25 K B	
C416	87-010-545-080	CAP, ELECT 0.22-50V		C831	87-010-198-080	CAP, CHIP 0.022	
C417	87-012-157-080	C-CAP,S 330P-50 CH		CN202	8A-CH4-689-010	CONN,3P V 2.5	
C418	87-010-213-080	C-CAP,S 0.015-50 B		CN205	87-A60-109-010	CONN,2P V S2M-2W	
C419	87-A11-608-080	C-CAP,S 0.33-25 K B		CN301	8A-CH4-689-010	CONN,3P V 2.5	
C420	87-016-369-080	C-CAP,S 0.033-25 B K		CN401	87-A60-424-010	CONN,16P V TOC-B	
C421	87-A11-177-080	C-CAP,S 0.15-16 K B		CN403	87-099-201-010	CONN,8P 6216 H	
C422	87-010-183-080	C-CAP,S 2700P-50 B		CN802	8A-CH4-687-010	CONN,4P V 2.5	
C423	87-010-956-080	CHIP-CAP,S 0.068-25B		CNA205	8A-CD9-631-010	CONN ASSY, 2P DOOR	
C424	87-010-993-080	C-CAP,S 0.056-25 B		CNA402	8A-CD9-625-010	CONN ASSY,6P CD-ME	
C425	87-010-176-080	C-CAP,S 680P-50 SL		CNA802	8A-CD9-631-010	CONN ASSY, 4P TP-ME	
C426	87-A11-608-080	C-CAP,S 0.33-25 K B		L401	87-003-102-080	COIL, 10UH	
C428	87-010-197-080	CAP, CHIP 0.01 DM		L404	87-003-152-080	COIL, 100UH	
C429	87-010-186-080	CAP,CHIP 4700P		SFR430	87-024-437-080	SFR100K,RH063EC	
C430	87-012-156-080	C-CAP,S 220P-50 CH		SW205	87-036-389-010	SW, PUSH 1-1-1 R8120125	
C431	87-010-545-080	CAP, ELECT 0.22-50V		X401	8Z-CD5-633-010	VIB, CER16.93MHZ FCR16.93M2	
C432	87-010-374-080	CAP, ELECT 47-10V		FRONT C.B			
C433	87-010-401-080	CAP, ELECT 1-50V		C601	87-010-313-080	CAP, CHIP 18P	
C434	87-010-184-080	CHIP CAPACITOR 3300P(K)		C602	87-010-315-080	C-CAP,S 27P-50 CH	
C435	87-010-197-080	CAP, CHIP 0.01 DM		C603	87-010-319-080	C-CAP,S 56P-50 CH	
C436	87-010-374-080	CAP, ELECT 47-10V		C604	87-010-312-080	C-CAP,S 15P-50 CH	
C437	87-010-404-080	CAP, ELECT 4.7-50V		C605	87-010-317-080	C-CAP,S 39P-50 CH	
C438	87-016-669-080	C-CAP,S 0.1-25 K B		C607	87-010-196-080	CHIP CAPACITOR,0.1-25	
C439	87-010-178-080	CHIP CAP 1000P		C608	87-010-196-080	CHIP CAPACITOR,0.1-25	
C440	87-010-145-080	C-CAP, S 1P-50 C CH		C610	87-010-555-040	CAP,E 100-10 GAS	
C441	87-010-197-080	CAP, CHIP 0.01 DM		C611	87-010-196-080	CHIP CAPACITOR,0.1-25	
C442	87-010-312-080	C-CAP,S 15P-50 CH		C612	87-A10-189-040	CAP,E 220-10	
C445	87-012-368-080	C-CAP,S 0.1-50 F		C613	87-010-495-040	CAP,E 2.2-50 GAS	
C446	87-012-368-080	C-CAP,S 0.1-50 F		C614	87-010-196-080	CHIP CAPACITOR,0.1-25	
C447	87-012-368-080	C-CAP,S 0.1-50 F		C615	87-010-493-040	CAP,E 0.47-50 GAS	
C448	87-010-315-080	C-CAP,S 27P-50 CH		C616	87-010-494-040	CAP,E 1-50 GAS	
C450	87-012-140-080	CAP 470P		C620	87-015-785-080	CHIP CAPACITOR, 0.1FZ-25Z	
C451	87-012-156-080	C-CAP,S 220P-50 CH		C625	87-A12-317-080	C-CAP,U 0.1-50 Z F	
C455	87-010-247-080	CAP, ELECT 100-50V		C627	87-010-196-080	CHIP CAPACITOR,0.1-25	
C457	87-010-312-080	C-CAP,S 15P-50 CH		C629	87-A12-317-080	C-CAP,U 0.1-50 Z F	
C458	87-010-312-080	C-CAP,S 15P-50 CH		C630	87-A12-317-080	C-CAP,U 0.1-50 Z F	
C459	87-010-263-080	CAP, ELECT 100-10V		C631	87-A12-317-080	C-CAP,U 0.1-50 Z F	
C460	87-015-819-080	CAPACITOR,0.01		C632	87-A12-317-080	C-CAP,U 0.1-50 Z F	
C461	87-010-197-080	CAP, CHIP 0.01 DM		C633	87-A12-317-080	C-CAP,U 0.1-50 Z F	
C462	87-010-248-080	CAP, ELECT 220-10V		C635	87-012-195-080	C-CAP,S 100P-50 J CH	
C463	87-010-197-080	CAP, CHIP 0.01 DM		C636	87-012-195-080	C-CAP,S 100P-50 J CH	
C465	87-010-404-080	CAP, ELECT 4.7-50V		C637	87-012-195-080	C-CAP,S 100P-50 J CH	
C466	87-012-368-080	C-CAP,S 0.1-50 F		C638	87-012-195-080	C-CAP,S 100P-50 J CH	
C467	87-010-263-080	CAP, ELECT 100-10V		C639	87-012-195-080	C-CAP,S 100P-50 J CH	
C469	87-012-154-080	C-CAP,S 150P-50 CH		C640	87-012-195-080	C-CAP,S 100P-50 J CH	
C470	87-010-544-080	CAP, ELECT 0.1-50V		C641	87-012-195-080	C-CAP,S 100P-50 J CH	
C471	87-015-785-080	CHIP CAPACITOR, 0.1FZ-25Z		C642	87-012-195-080	C-CAP,S 100P-50 J CH	
C472	87-015-785-080	CHIP CAPACITOR, 0.1FZ-25Z		C643	87-012-195-080	C-CAP,S 100P-50 J CH	
C473	87-015-785-080	CHIP CAPACITOR, 0.1FZ-25Z		C644	87-012-195-080	C-CAP,S 100P-50 J CH	
C474	87-015-785-080	CHIP CAPACITOR, 0.1FZ-25Z		C645	87-012-195-080	C-CAP,S 100P-50 J CH	
C475	87-010-197-080	CAP, CHIP 0.01 DM		C646	87-012-195-080	C-CAP,S 100P-50 J CH	
C476	87-010-236-080	CAP,E 1000-10 SME		C647	87-012-195-080	C-CAP,S 100P-50 J CH	
C477	87-010-197-080	CAP, CHIP 0.01 DM		C648	87-012-195-080	C-CAP,S 100P-50 J CH	
C478	87-010-263-080	CAP, ELECT 100-10V		C649	87-012-195-080	C-CAP,S 100P-50 J CH	
C479	87-010-197-080	CAP, CHIP 0.01 DM		C650	87-012-195-080	C-CAP,S 100P-50 J CH	
C480	87-010-221-080	CAP, ELECT 470-10V		C651	87-012-195-080	C-CAP,S 100P-50 J CH	
C481	87-010-405-080	CAP, ELECT 10-50V		C652	87-012-195-080	C-CAP,S 100P-50 J CH	
C482	87-010-405-080	CAP, ELECT 10-50V		C653	87-012-195-080	C-CAP,S 100P-50 J CH	
C489	87-012-368-080	C-CAP,S 0.1-50 F		C654	87-012-195-080	C-CAP,S 100P-50 J CH	
C490	87-012-368-080	C-CAP,S 0.1-50 F		C655	87-012-195-080	C-CAP,S 100P-50 J CH	
C491	87-010-197-080	CAP, CHIP 0.01 DM		C656	87-012-195-080	C-CAP,S 100P-50 J CH	
C492	87-010-221-080	CAP, ELECT 470-10V		C657	87-012-195-080	C-CAP,S 100P-50 J CH	
C494	87-010-197-080	CAP, CHIP 0.01 DM		C658	87-A12-317-080	C-CAP,U 0.1-50 Z F	
C495	87-016-669-080	C-CAP,S 0.1-25 K B		CN601	87-099-033-010	CONN,16P 6216 H	
C501	87-012-368-080	C-CAP,S 0.1-50 F					
C502	87-010-322-080	C-CAP,S 100P-50 CH					

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
CN602	87-099-201-010	CONN,8P 6216 H		C43	87-012-349-080	C-CAP,S 1000P-50 CH	
CNA603	8A-CD9-624-010	CONN ASSY,4P TU-FR		C44	87-010-311-080	CAP 12P	
CNA604	8A-CD9-623-010	CONN ASSY,4P KEY		C45	87-010-312-080	C-CAP,S 15P-50 CH	
L601	87-003-102-080	COIL, 10UH		C46	87-010-197-080	CAP, CHIP 0.01 DM	
LCD601	8Z-CH4-635-010	LCD,HLC7365 ZCH-4		C47	87-010-197-080	CAP, CHIP 0.01 DM	
LED602	88-CD6-630-010	LED,934ID RED		C48	87-010-197-080	CAP, CHIP 0.01 DM	
LED603	88-CD6-630-010	LED,934ID RED		C49	87-012-140-080	CAP 470P	
LED604	88-CD6-630-010	LED,934ID RED		C50	87-010-197-080	CAP, CHIP 0.01 DM	
LED606	88-CD6-630-010	LED,934ID RED		C51	87-010-316-080	C-CAP,S 33P-50 CH	
LED607	88-CD6-630-010	LED,934ID RED		C52	87-010-197-080	CAP, CHIP 0.01 DM	
LED608	88-CD6-630-010	LED,934ID RED		C53	87-010-197-080	CAP, CHIP 0.01 DM	
LED610	88-CD6-631-010	LED,934GD GRN		C54	87-014-055-080	CAP,PP 820P-100 J<51 K<S>,51 EZ<S>	
S601	87-A90-164-080	SW,TACT SKQAB(N)		C55	87-010-197-080	CAP, CHIP 0.01 DM	
S604	87-A90-164-080	SW,TACT SKQAB(N)		C71	87-010-197-080	CAP, CHIP 0.01 DM	
S605	87-A90-164-080	SW,TACT SKQAB(N)		C72	87-010-263-080	CAP, ELECT 100-10V	
S606	87-A91-704-080	SW,TACT EVQ 214 05R		C73	87-010-197-080	CAP, CHIP 0.01 DM	
S607	87-A91-704-080	SW,TACT EVQ 214 05R		C75	87-010-197-080	CAP, CHIP 0.01 DM	
S611	87-A90-164-080	SW,TACT SKQAB(N)		C91	87-012-140-080	CAP 470P	
S613	87-A90-164-080	SW,TACT SKQAB(N)		C92	87-010-197-080	CAP, CHIP 0.01 DM	
S614	87-A91-704-080	SW,TACT EVQ 214 05R		C93	87-010-197-080	CAP, CHIP 0.01 DM	
S615	87-A91-704-080	SW,TACT EVQ 214 05R		CF1	87-A91-094-010	FLTR,CDA10.7 MG80A	
X601	87-030-273-010	VIB,XTAL 32.768K5PPM		CF2	87-008-261-010	FILTER, SFE10.7MA5-A	
X602	87-030-376-080	VIB,CER CSA5.76MG200		CF3	87-008-261-010	FILTER, SFE10.7MA5-A	
TUNER C.B				CN2	87-099-854-010	CONN,6P S2M-6W	
				CN3	87-A60-110-010	CONN,4P V S2M-4W	
C1	87-010-314-080	C-CAP,S 22P-50V		CN605	87-A60-113-010	CONN,2P H S2M-2WR	
C2	87-010-316-080	C-CAP,S 33P-50 CH		HD1	88-CD6-661-010	HLDR,BAR ANT.	
C3	87-010-314-080	C-CAP,S 22P-50V		HD2	88-CD6-661-010	HLDR,BAR ANT.	
C5	87-A11-067-080	C-CAP,S 1-10 K B		L2	87-A50-560-010	COIL,FM BPF(ACD)	
C6	87-010-313-080	CAP, CHIP 18P<51 U<S>,53 U<L>,52 U<W>>		L3	8A-CH4-670-010	BAR-ANT,MW 2B-ACH(COI)<51 U<S>,53 U<L>,52 U<W>>	
C7	87-014-049-080	CAP,PP 470P-100 J		L3	8A-CH4-671-010	BAR-ANT,MW/LW 3B-ACH(COI)<51 K<S>,51 EZ<S>	
C8	87-012-349-080	C-CAP,S 1000P-50 CH		L4	87-A50-420-010	COIL,MW OSC(SYN)	
C10	87-010-197-080	CAP, CHIP 0.01 DM		L5	87-A50-566-010	COIL,FM RF EX(ACH)	
C11	87-010-197-080	CAP, CHIP 0.01 DM		L6	87-A50-567-010	COIL,FM OSC(ACH)	
C12	87-010-197-080	CAP, CHIP 0.01 DM		L7	87-A91-308-010	FLTR,PCFAZH- 450T (TOK)	
C13	87-010-150-080	C-CAP,S 6P-50 CH		L8	87-005-849-080	COIL,10UH(CECS)	
C14	87-010-303-080	C-CAP,S 330P-50CH		L51	87-A50-421-010	COIL,LW OSC(SYN)<51 K<S>,51 EZ<S>>	
C15	87-012-349-080	C-CAP,S 1000P-50 CH		LED601	88-CD6-630-010	LED,934ID RED	
C16	87-010-374-080	CAP, ELECT 47-10V		LED609	88-CD6-630-010	LED,934ID RED	
C17	87-010-198-080	CAP, CHIP 0.022		TC1	87-011-254-080	TRIMMER,20P LAR	
C18	87-015-835-080	C-CAP,0.047 D		TC51	87-A91-659-010	TRIMMER,50P 4.0X4.5 ECRL<51 K<S>,51 EZ<S>>	
C19	87-010-263-080	CAP, ELECT 100-10V		X1	87-A70-061-010	VIB,XTAL 4.500MHZ CSA-309	
C20	87-010-404-080	CAP, ELECT 4.7-50V		H.P. CB			
C21	87-010-197-080	CAP, CHIP 0.01 DM		CN101	8A-CD9-628-010	CONN ASSY,3P MA-HP	
C22	87-010-197-080	CAP, CHIP 0.01 DM		CN102	87-A60-685-010	CONN,4P H WHT EH	
C23	87-010-197-080	CAP, CHIP 0.01 DM		HP1	87-A60-569-010	JACK,HTJ-035-18	
C24	87-015-770-080	C-CHIP,330P(SL)K		BATT1 C.B			
C25	87-016-460-080	C-CAP,S 0.22-16 B		C30	87-010-198-080	C-CAP,S 0.022-50 F	
C27	87-A11-067-080	C-CAP,S 1-10 K B		C901	87-010-192-080	C-CAP,S 0.022-50 F	
C28	87-016-669-080	C-CAP,S 0.1-25 K B		C902	87-010-192-080	C-CAP,S 0.022-50 F	
C29	87-016-669-080	C-CAP,S 0.1-25 K B		C903	87-010-192-080	C-CAP,S 0.022-50 F	
C30	87-010-213-080	C-CAP,S 0.015-50 B<51 K<S>,51 EZ<S>>		C904	87-010-192-080	C-CAP,S 0.022-50 F	
C30	87-010-198-080	CAP, CHIP 0.022<51 U<S>,53 U<L>,52 U<W>>		CNA901	8A-CD9-627-010	CONN ASSY,3P PWR	
C33	87-012-358-080	C-CAP,S 0.47-10 F Z		▲PR901	87-A90-092-080	PROTECTOR,2.5A 491<51 K<S>,51 EZ<S>>	
C34	87-012-358-080	C-CAP,S 0.47-10 F Z		SP901	87-CD6-213-010	SPR-C,BATT (-)	
C35	87-015-819-080	CAPACITOR,0.01		SP902	87-CD6-213-010	SPR-C,BATT (-)	
C36	87-010-263-080	CAP, ELECT 100-10V		BATT2 C.B			
C37	87-010-197-080	CAP, CHIP 0.01 DM		SP903	87-CD6-213-010	SPR-C,BATT (-)	
C38	87-010-374-080	CAP, ELECT 47-10V		SP904	87-CD6-213-010	SPR-C,BATT (-)	
C39	87-010-404-080	CAP, ELECT 4.7-50V					
C40	87-010-197-080	CAP, CHIP 0.01 DM					
C41	87-012-349-080	C-CAP,S 1000P-50 CH					
C42	87-012-349-080	C-CAP,S 1000P-50 CH					

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
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## MOTOR C.B

M2	9X-262-576-910	MOTOR GEAR ASSY
PIN3	91-564-722-110	CONNECTOR 6P
SW1	91-572-085-120	LEAF SW

## KEY C.B

S608	87-A91-704-080	SW,TACT EVQ 214 05R
S609	87-A90-164-080	SW,TACT SKQAB(N)
S610	87-A90-164-080	SW,TACT SKQAB(N)

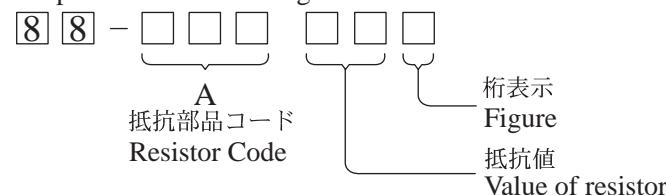
- Regarding connectors, they are not stocked as they are not the initial order items.

The connectors are available after they are supplied from connector manufacturers upon the order is received.

## ○チップ抵抗部品コード/CHIP RESISTOR PART CODE

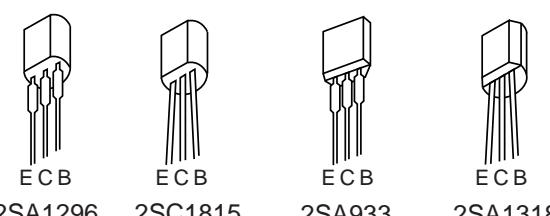
## チップ抵抗部品コードの成り立ち

## Chip Resistor Part Coding

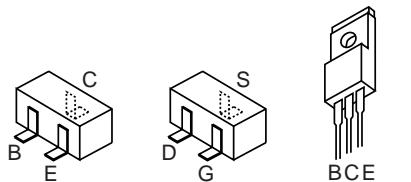
チップ抵抗  
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形/Form	L	W	t	
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

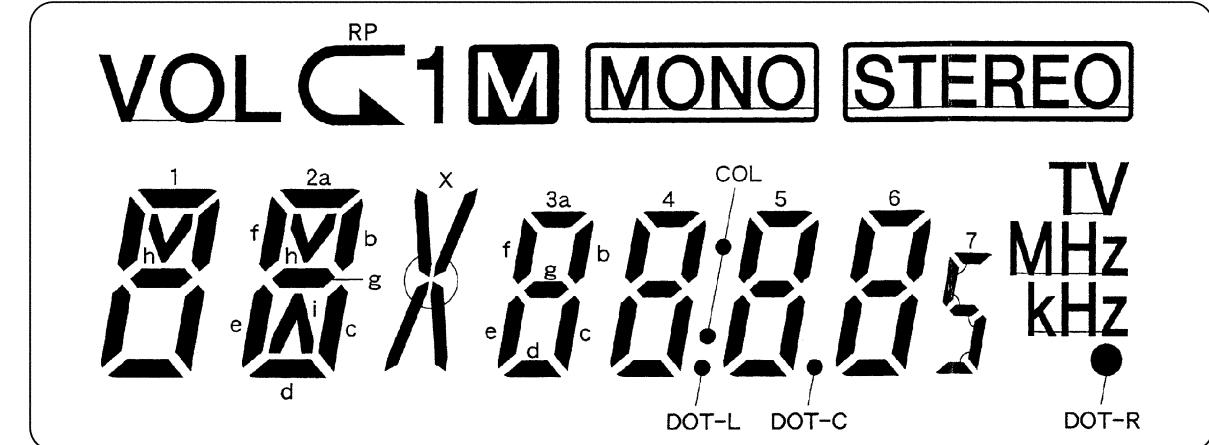
## TRANSISTOR ILLUSTRATION



2SA1296 2SC1815 2SA933  
2SC2001 2SC1740 DTC114TS  
DTC124XS



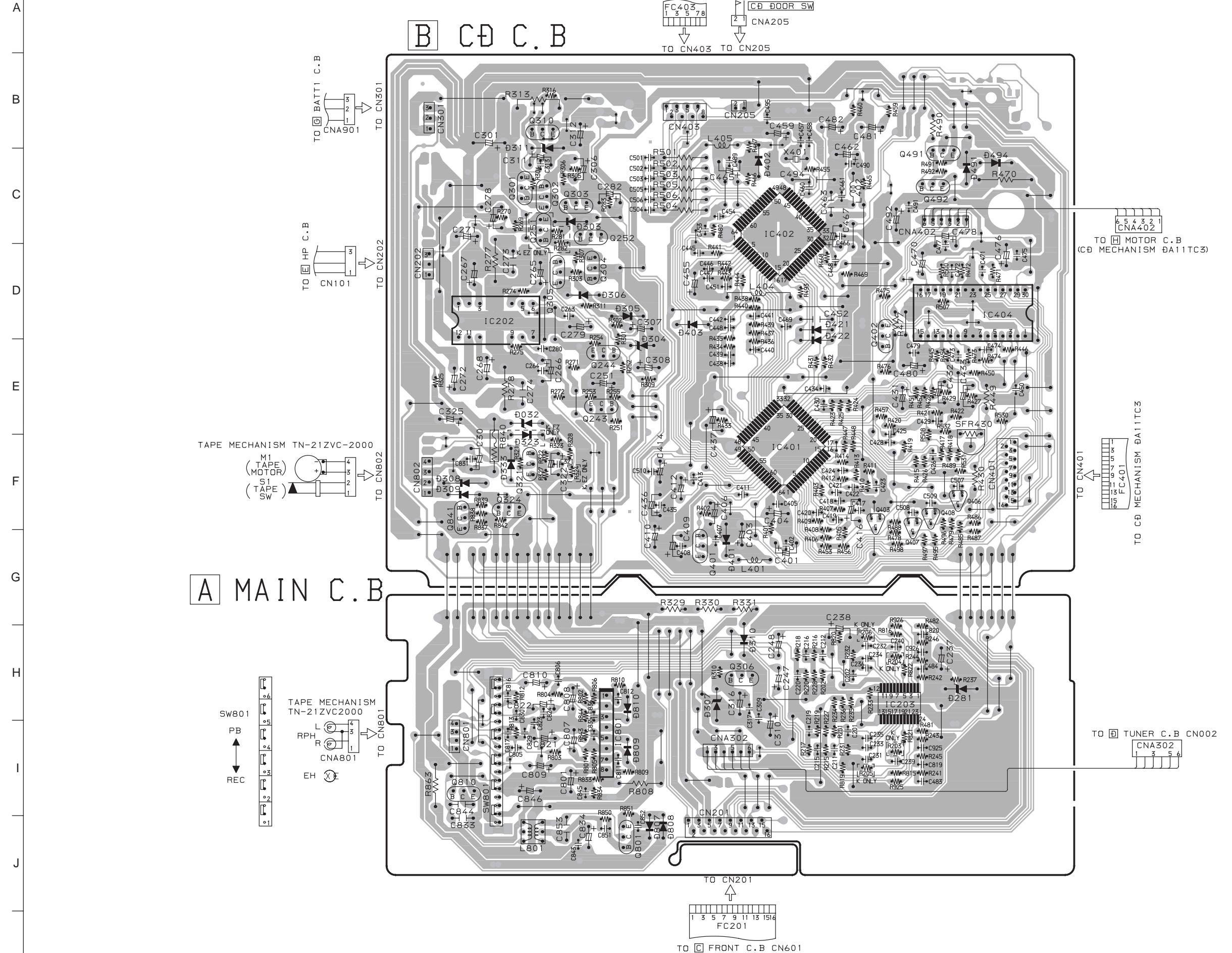
2SA1162 2SK302 2SB1370  
2SC2712  
2SC2714  
DTA114YK  
DTC114TK  
DTC114YK  
DTC124XK  
DTC144TK



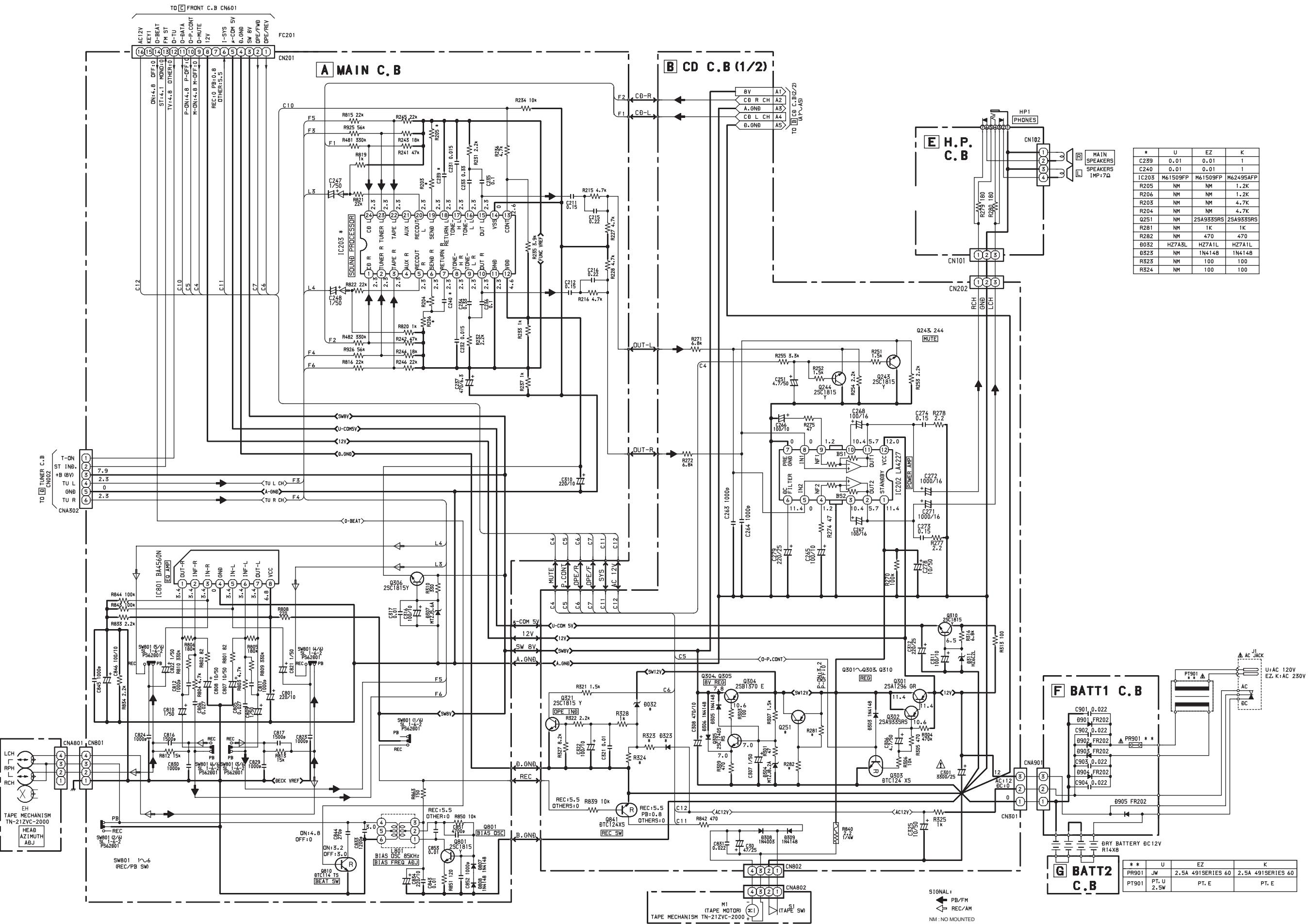
No	COM1	COM2	COM3
1	2b	2c	2d
2	1b	1c	1d
3	1a	1f	1e
4	1h	1g	VOL
5	2a	2f	2e
6	2h	2g	2i
7	3f	3e	RP
8	3a	3g	3d
9	3b	3c	1
10	4f	4e	M
11	4a	4g	4d
12	4b	4c	X
13	COL	DOT-L	MONO
14	5f	5e	DOT-R
15	5a	5g	5d
16	5b	5c	DOT-C
17	6f	6e	STEREO
18	6a	6g	6d
19	6b	6c	7
20	TV	MHz	kHz
21	COM1	---	---
22	---	COM2	---
23	---	---	COM3

## WIRING-1 (MAIN/CD)

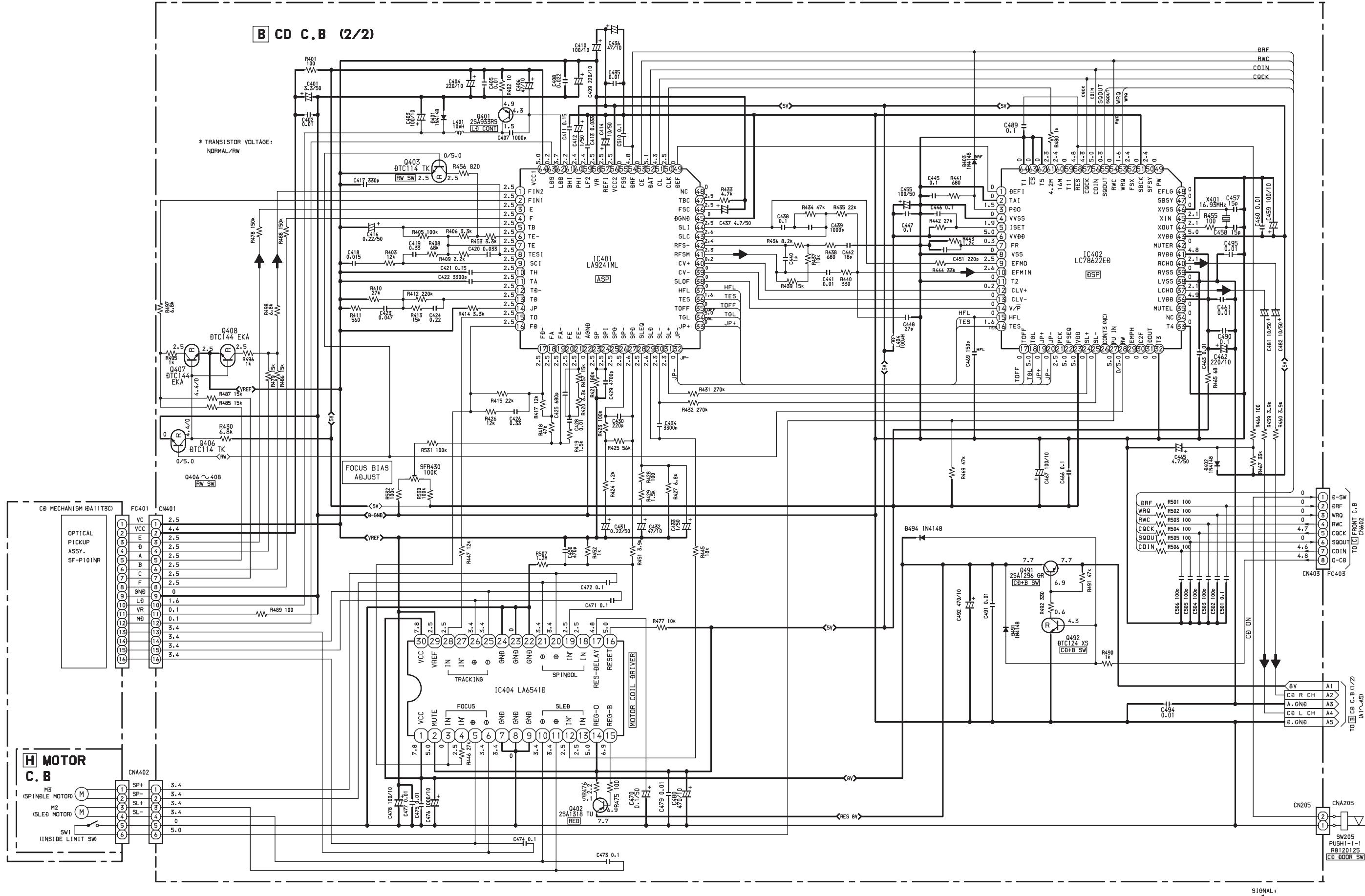
1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |



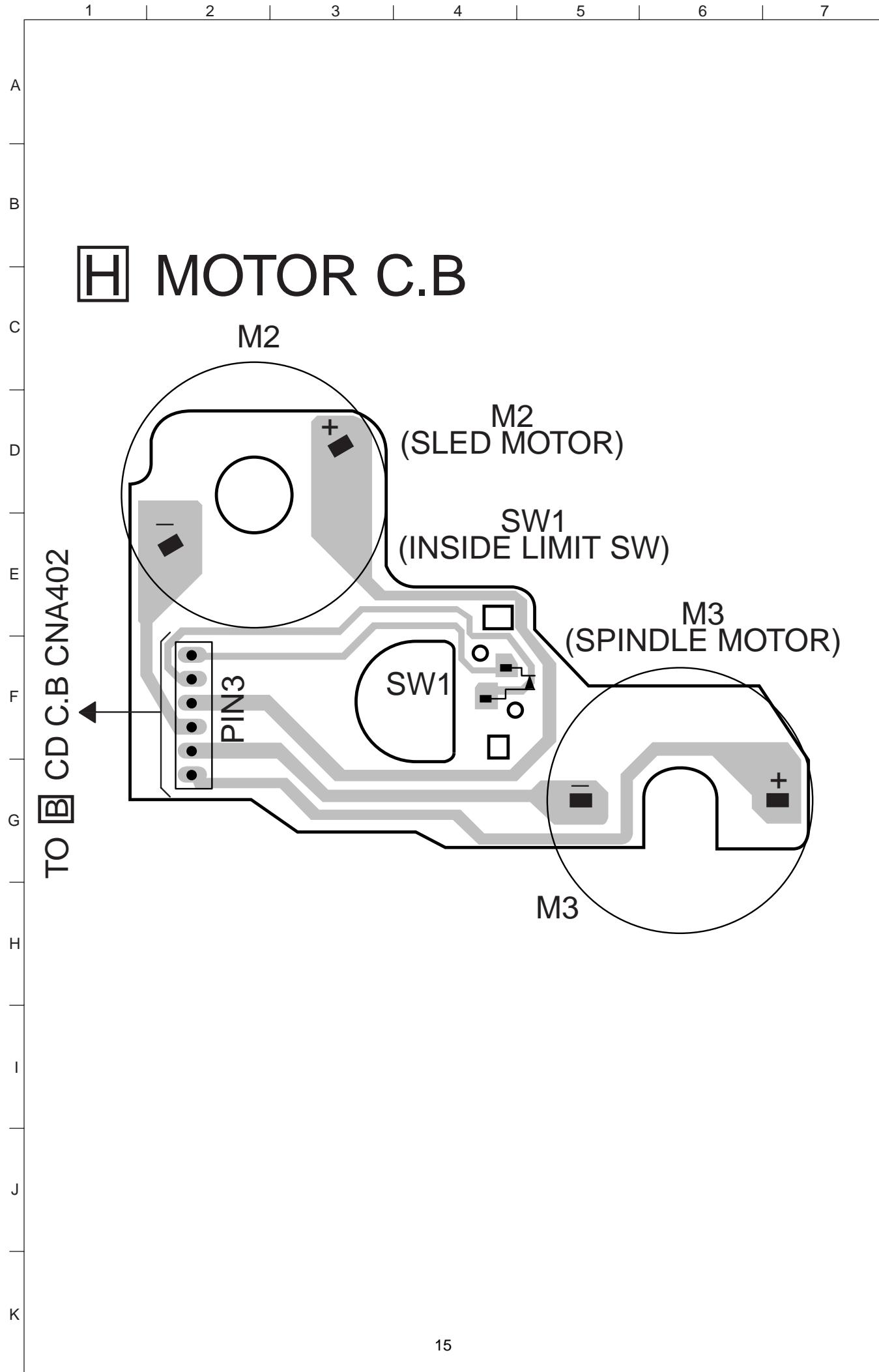
## SCHEMATIC DIAGRAM-1 (MAIN)



## SCHEMATIC DIAGRAM-2 (CD)

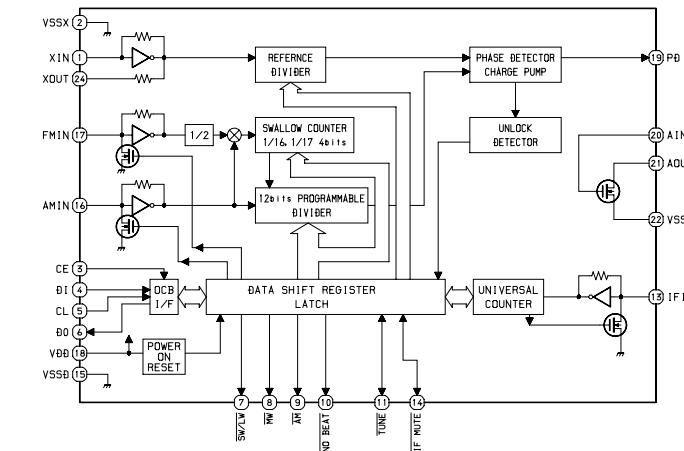


## WIRING-2 (MOTOR)

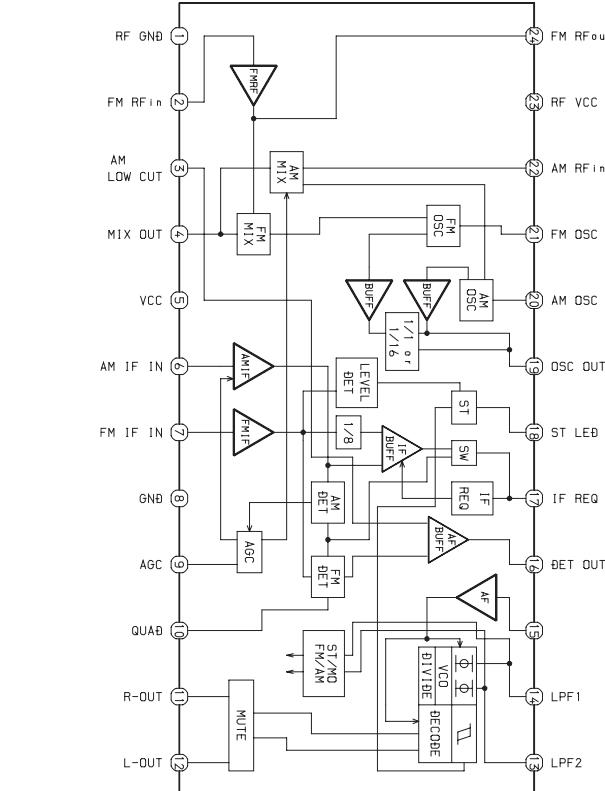


## IC BLOCK DIAGRAM

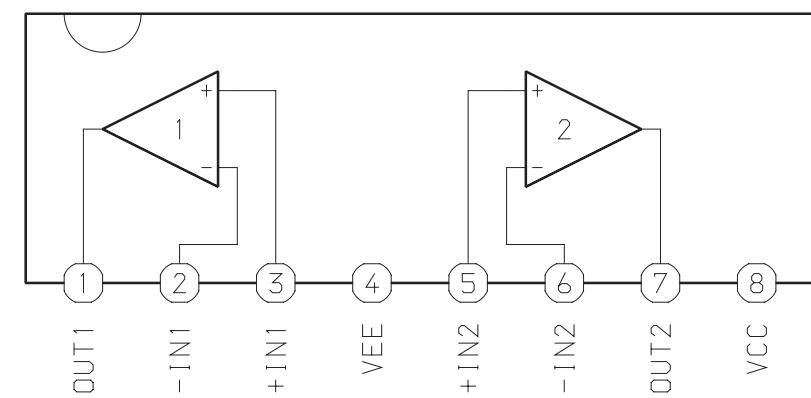
IC, LC7212M



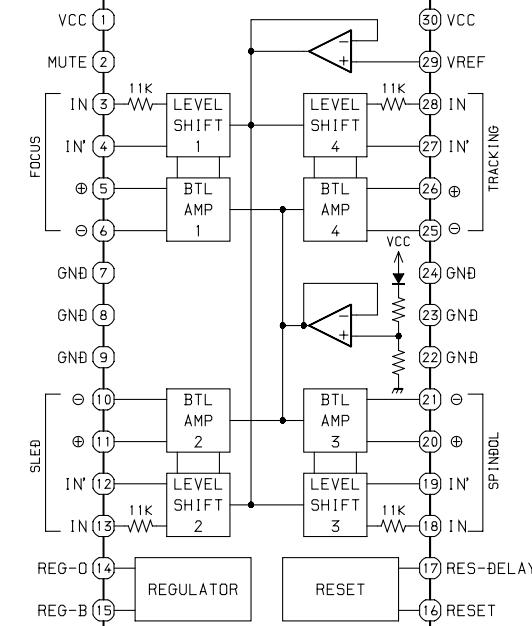
IC, TA2149N



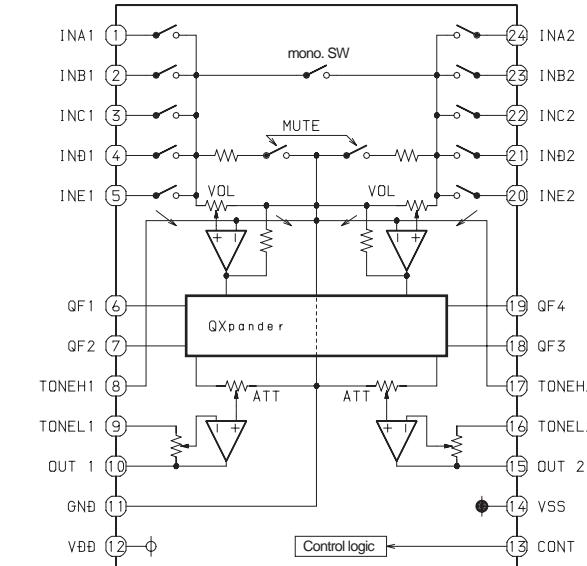
IC, BA4560N



IC, LA6541D



IC, M61509FP



A

B

6

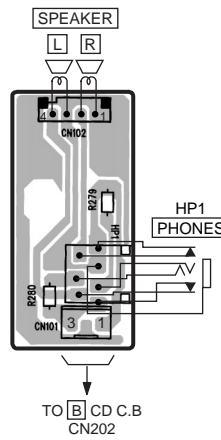
1

F

5

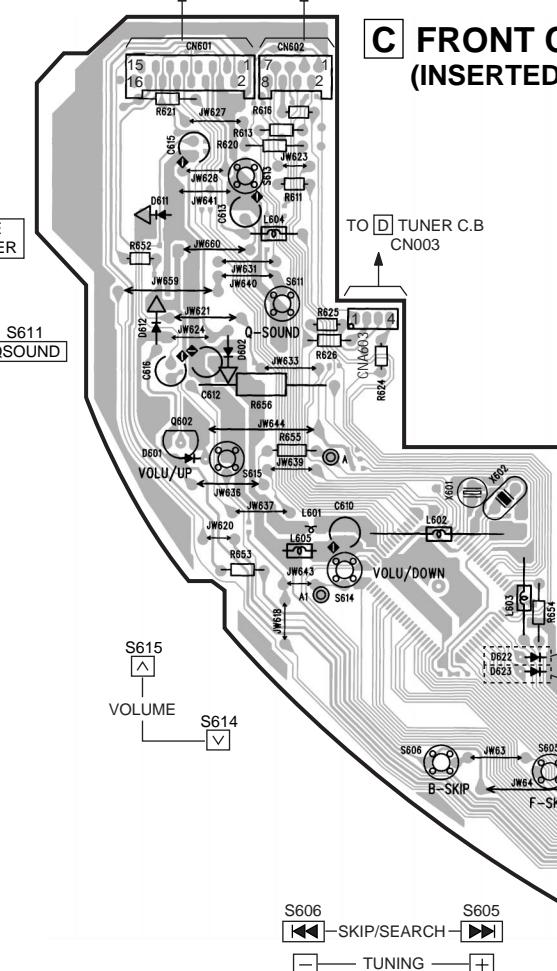
K

**E HP C.B  
(INSERTED PARTS)**

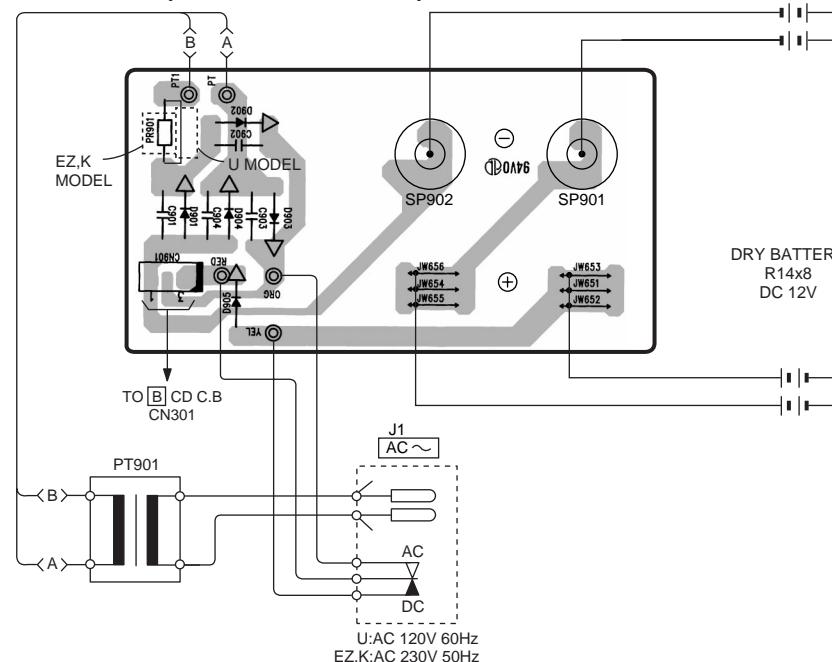


TO  MAIN C.B TO  CD C.B (2/2)

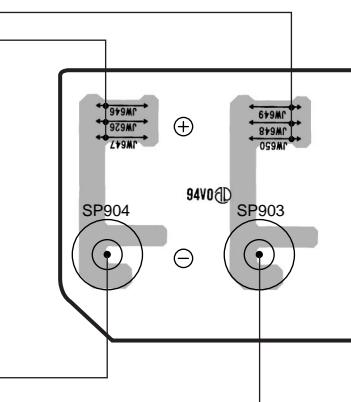
## **C FRONT C.B (INSERTED PARTS)**



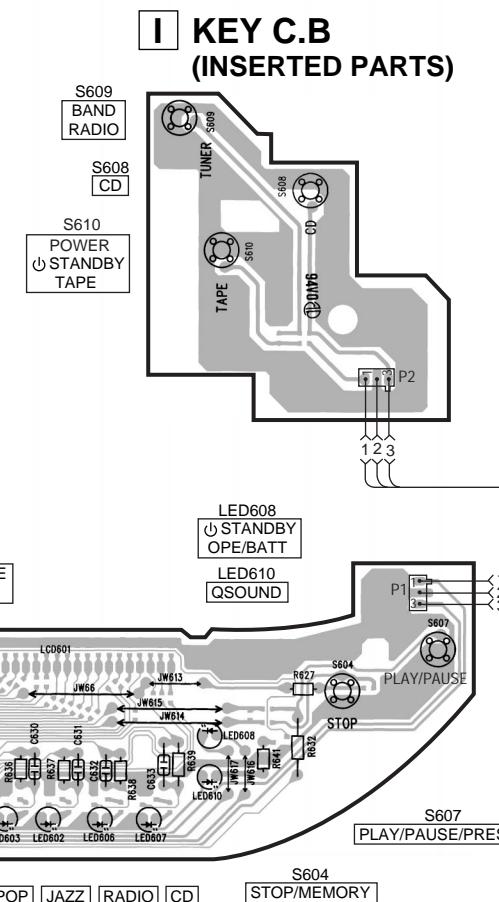
**F BATT1 C.B  
(INSERTED PARTS)**



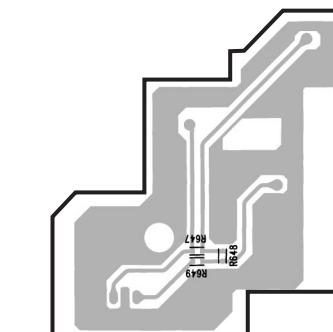
G BATT2 C.I.



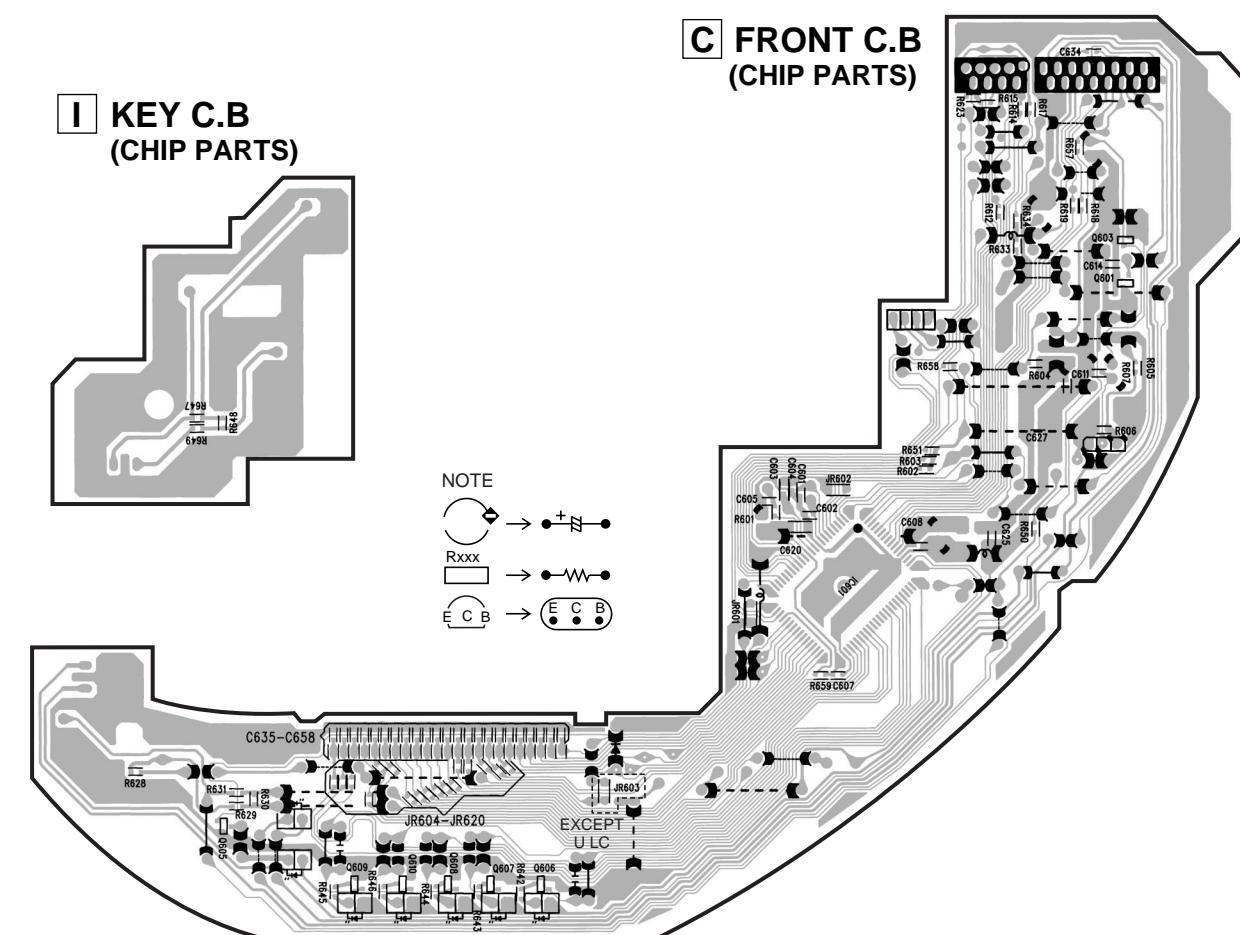
(INSERTED PAGE)



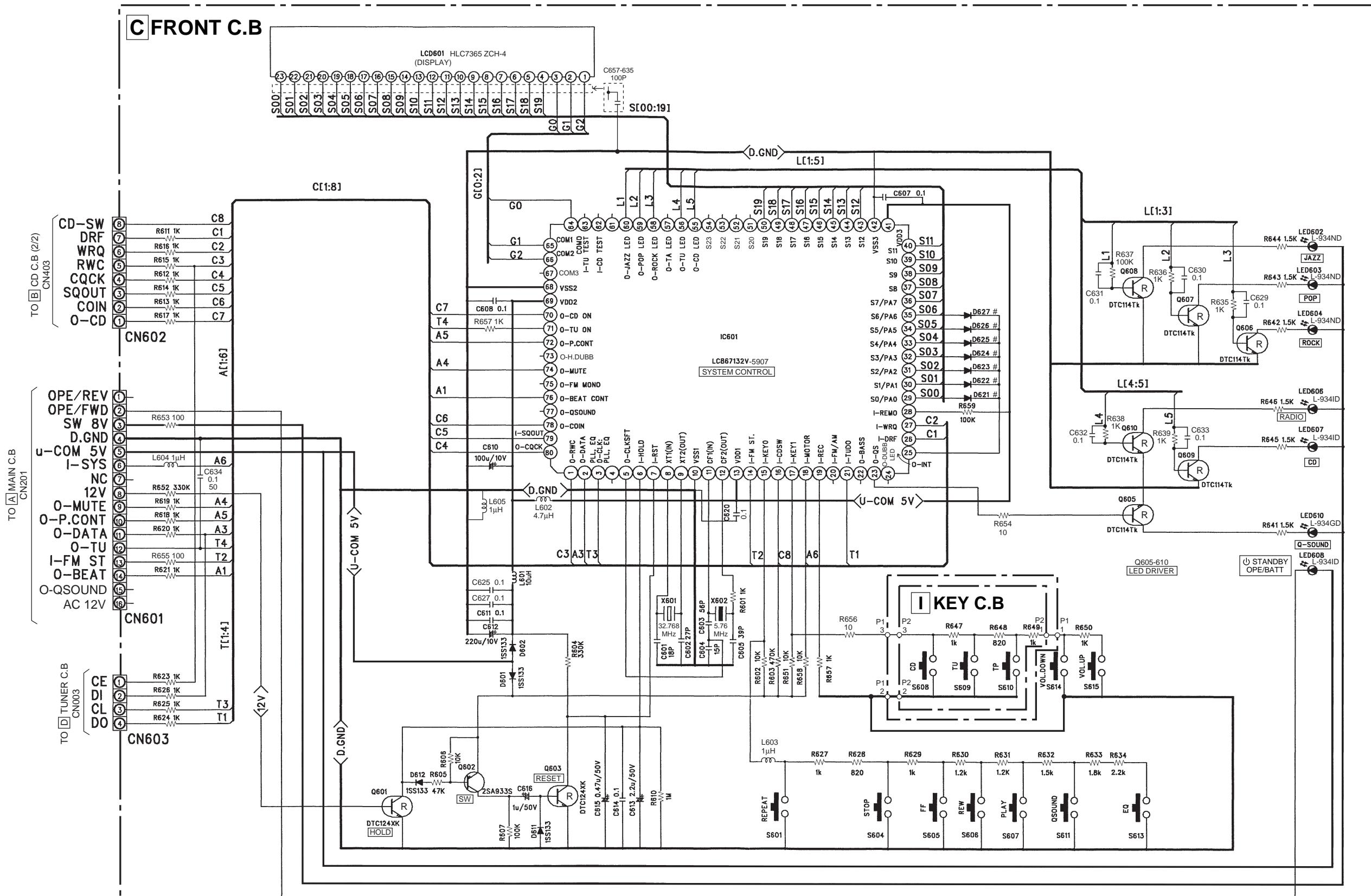
KEY C.B  
(CHIP PART)



**C FRONT C.B  
(CHIP PARTS)**



SCHEMATIC DIAGRAM-3 (FRONT/KEY)



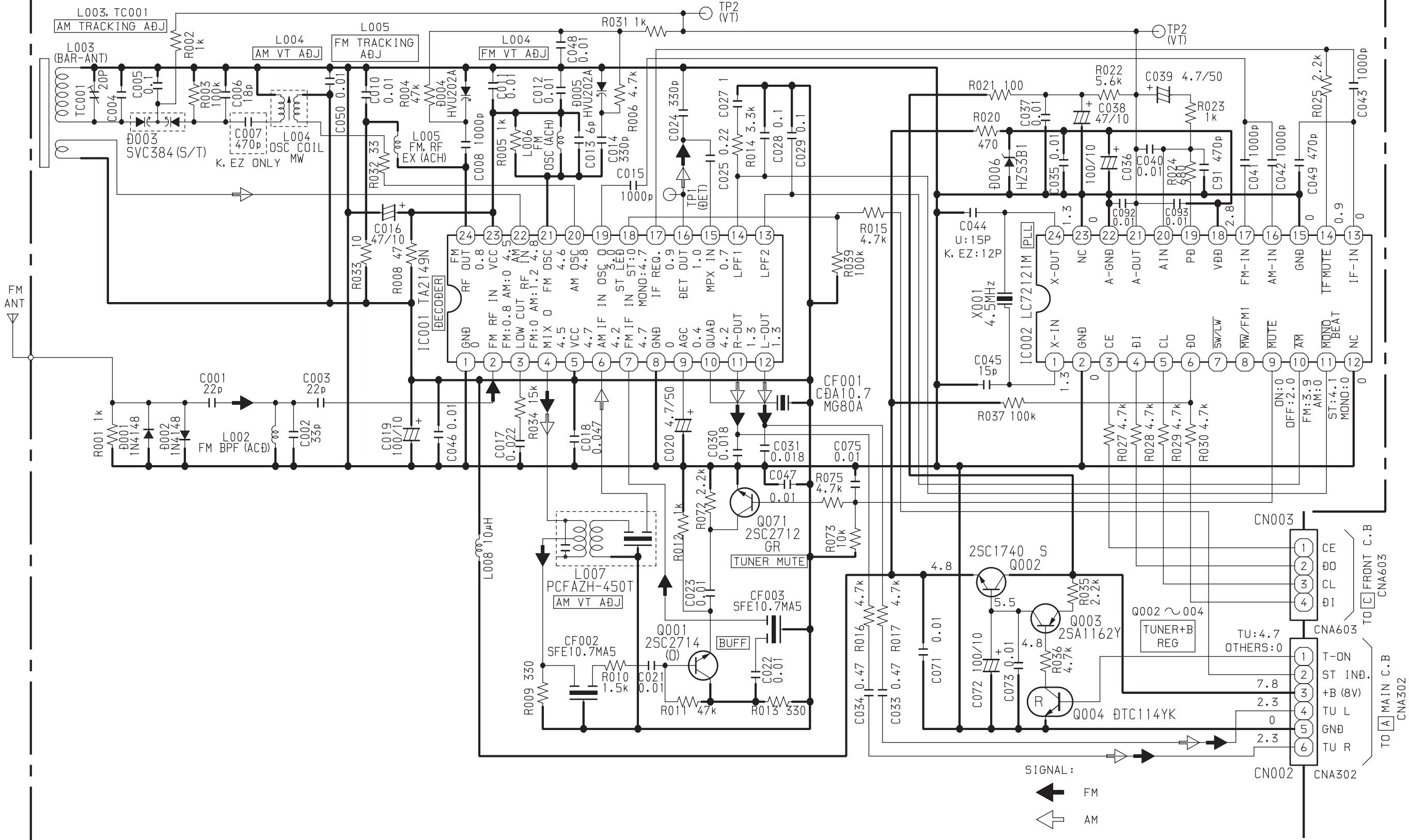
**\*\* KEY NAME \*\***

S601	FM MODE/OSC	S610	TAPE,STANBY
S604	STOP/MEMORY	S611	Q-SOUND
S605	▶◀ SKIP,SEARCH/UP	S612	T-BASS
S606	◀◀ SKIP,SEARCH/DOWN	S613	3 MODE EQUALIZER
S607	PLAY/PAUSE/PRESET	S614	VOLUME ▼
S608	CD	S615	VOLUME ▲
S609	TUNER/BAND		

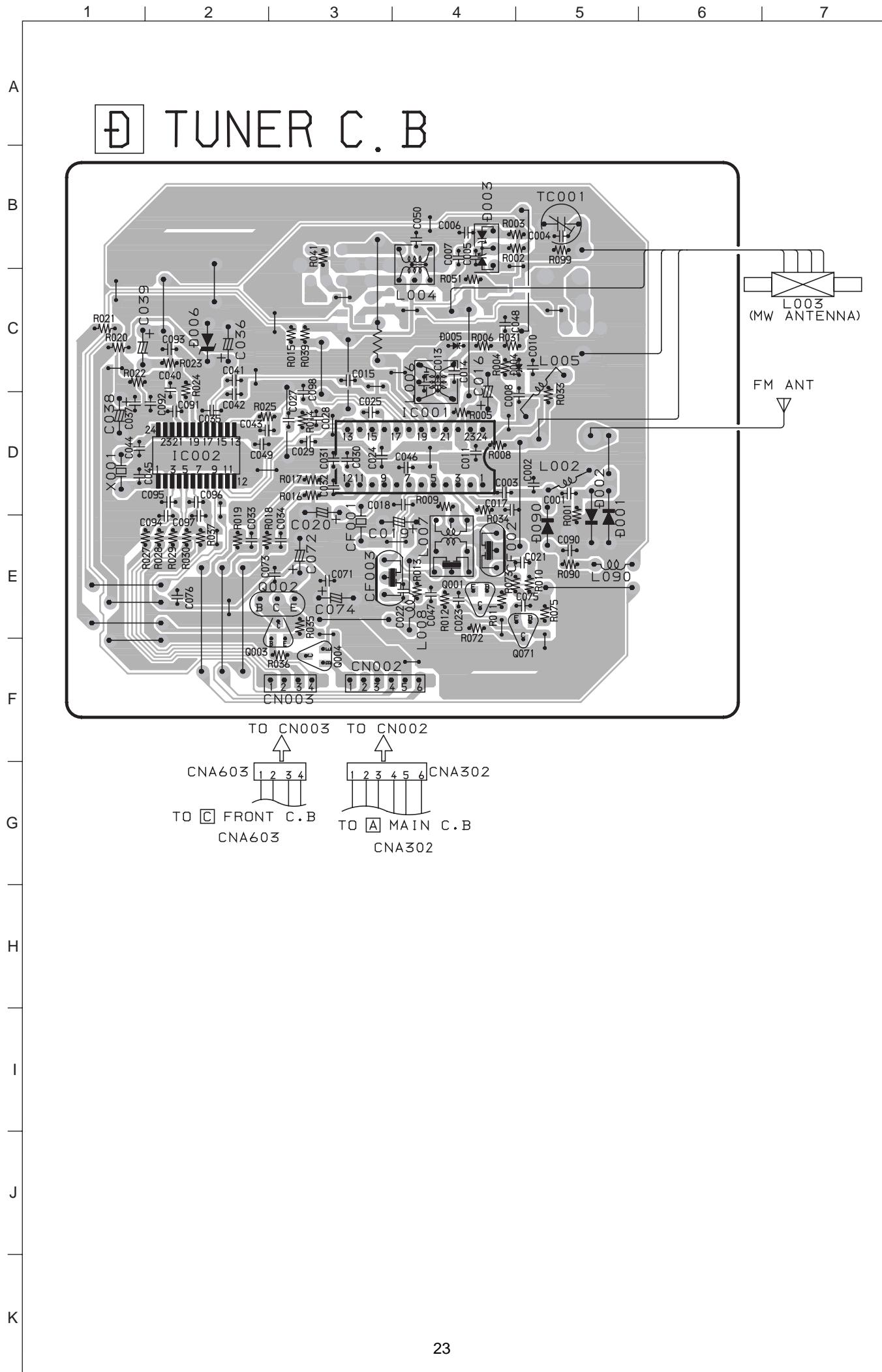
#	TU EZ K	TU U LH
D621:SW1	X	X
D622:LW	1SS133	X
D623:MW,10K	X	1SS133
D624:FM WIDE	X	X
D625:OIRT	X	X
D626:SW2	X	X
D627:SYN	1SS133	1SS133

## SCHEMATIC DIAGRAM-4 (TUNER U)

**D TUNER C.B**



## WIRING-4 (TUNER: U)



# WIRING-5 (TUNER: EZ, K)

1 | 2 | 3 | 4 | 5 | 6 | 7

A



TUNER C.B.

B

C

D

E

F

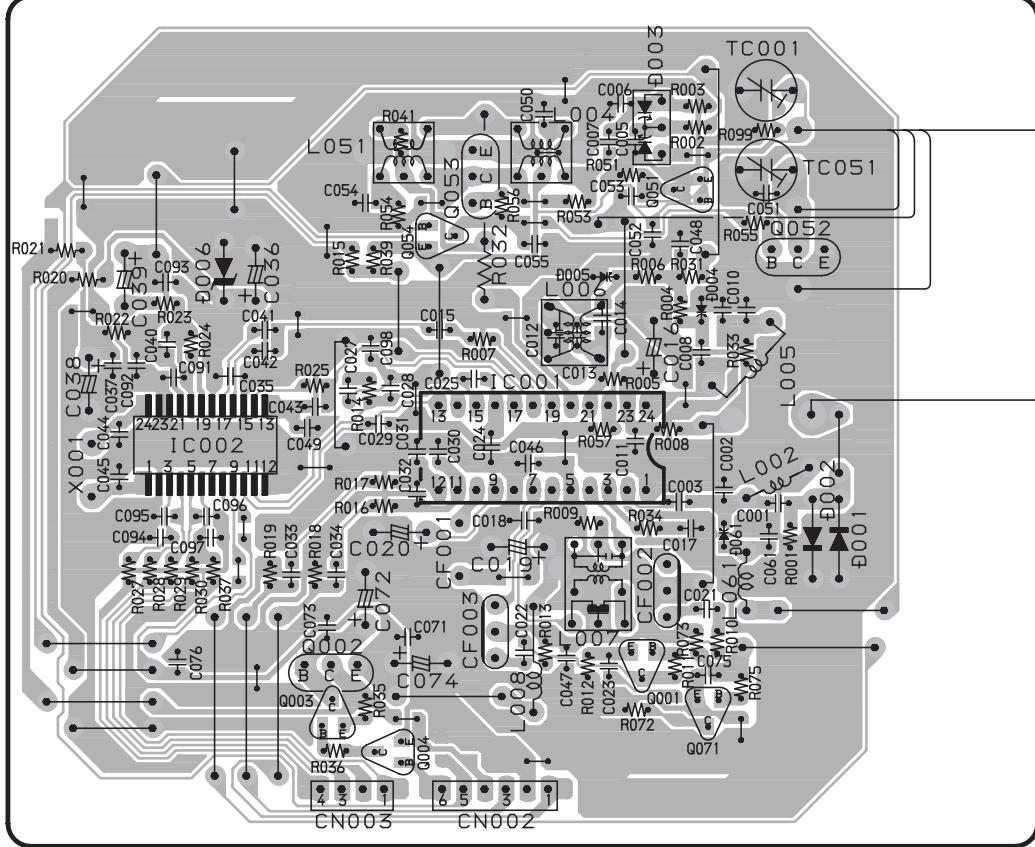
G

H

I

J

K



L003  
(BAR ANTENNA)

FM ANT

TO CN003 TO CN002

CNA603 [4 3 1]

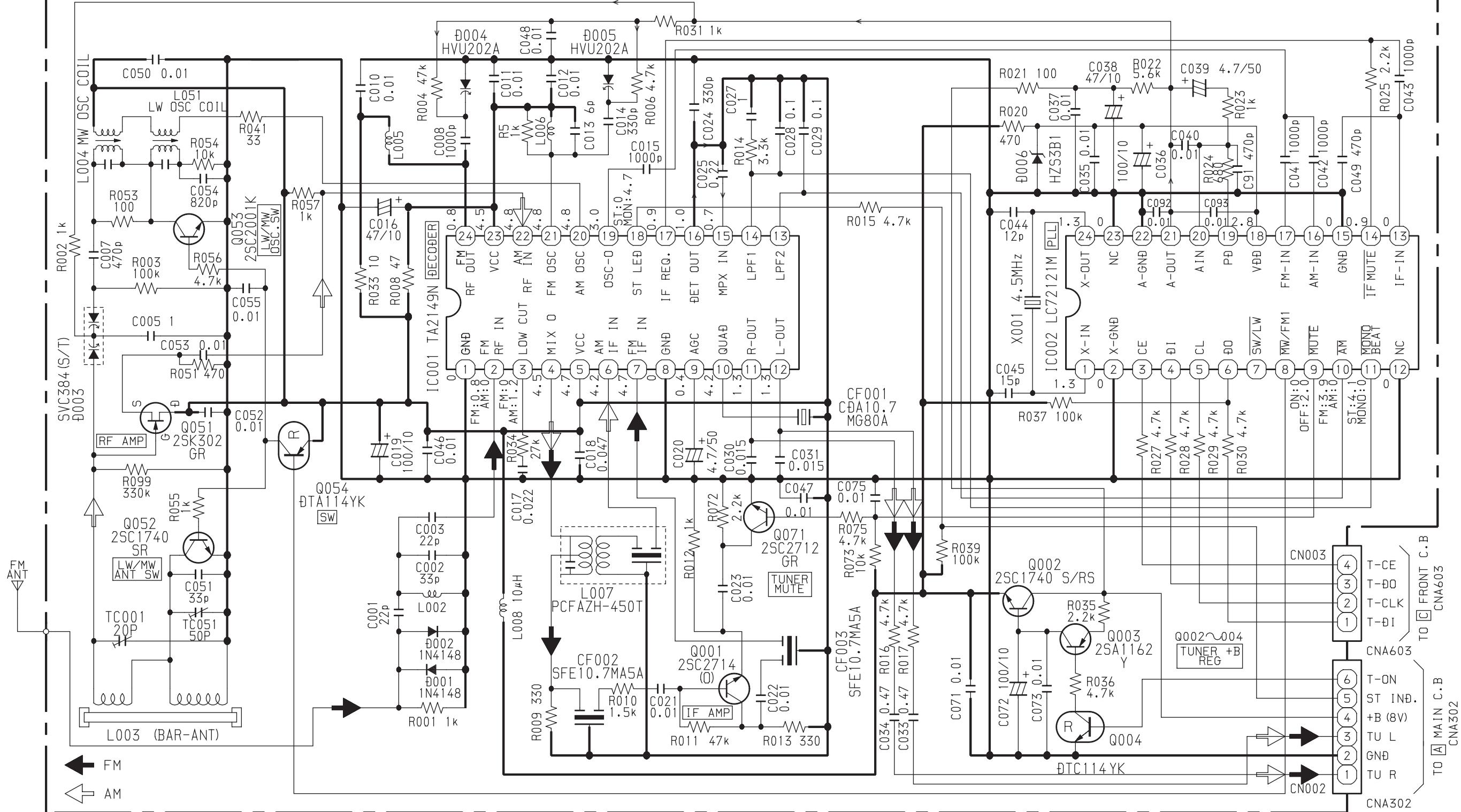
CNA302 [6 5 3 1]

TO C FRONT C.B. TO A MAIN C.B.

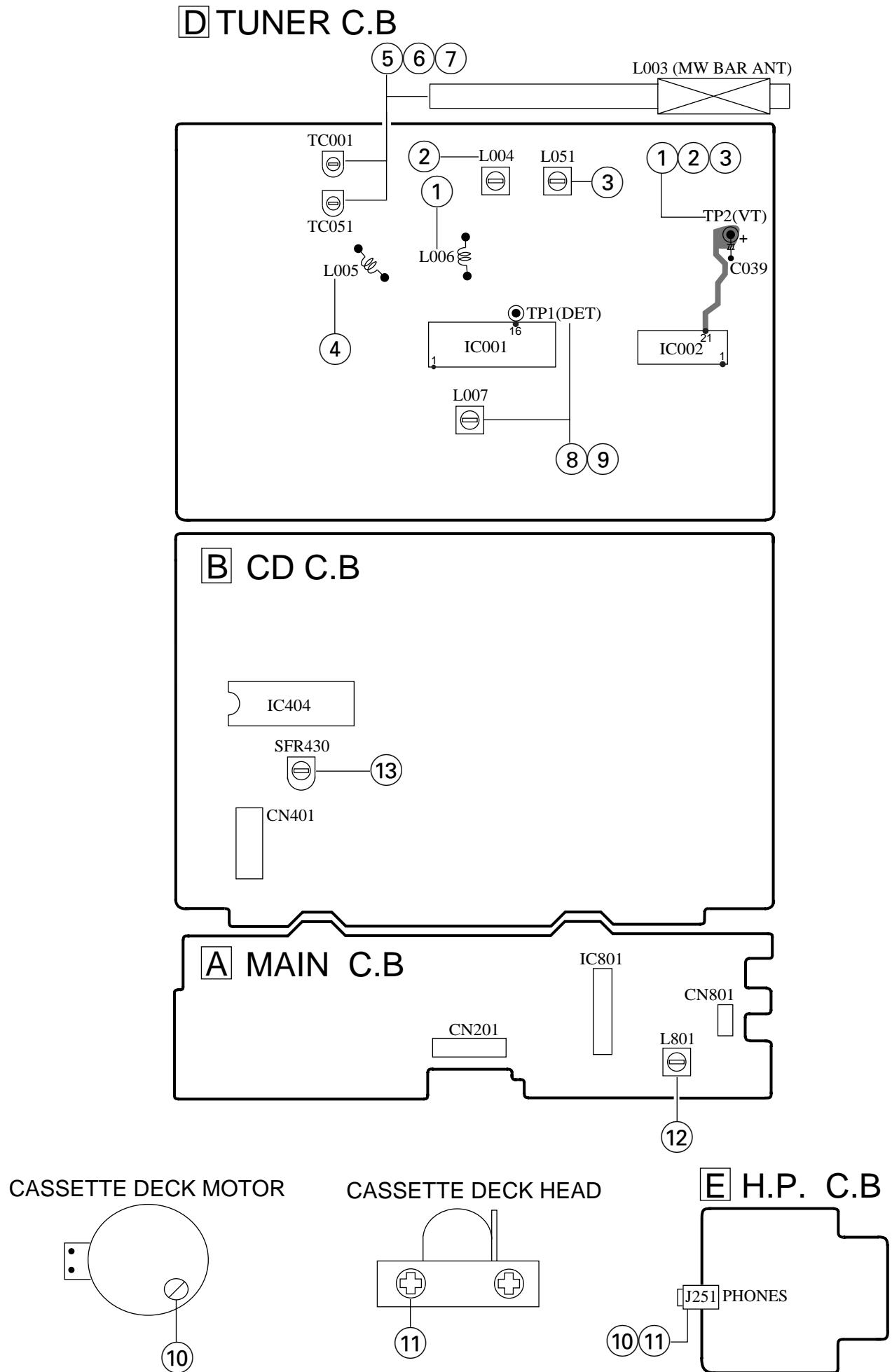
CNA603 CNA302

## SCHEMATIC DIAGRAM-5 (TUNER EZ/K)

D TUNER C.B



## ELECTRICAL ADJUSTMENT



### < TUNER SECTION >

1. FM VT Adjustment  
Settings : • Test point : TP2 (VT)  
• Adjustment location : L006  
Method : Set to FM 108.0MHz and adjust L006 so that the test point voltage becomes  $6.0V \pm 0.05V$ .
2. MW VT Adjustment  
Settings : • Test point : TP2 (VT)  
• Adjustment location : L004  
Method : Set to MW 1000kHz (U), MW 999kHz (EZ,K) and adjust L004 so that the test point voltage becomes  $3.75V \pm 0.05V$ .
3. LW VT Adjustment <EZ,K>  
Settings : • Test point : TP2 (VT)  
• Adjustment location : L051  
Method : Set to LW 288kHz and adjust L051 so that the test point voltage becomes  $4.5V \pm 0.05V$ .
4. FM Tracking Adjustment  
L005.....98.0MHz

5. MW Tracking Adjustment <U>  
L003.....600kHz  
TC001.....1400kHz

6. MW Tracking Adjustment <EZ,K>  
L003.....603kHz  
TC001.....1404kHz

7. LW Tracking Adjustment <EZ,K>  
L003.....153kHz  
TC051.....288kHz

8. AM IF Adjustment <U>  
Settings : • Test point : TP1(DET)  
• Adjustment location : L007  
Method : Adjust L007 so that the output level at 1400kHz becomes maximum.

9. AM IF Adjustment <EZ,K>  
Settings : • Test point : TP1 (DET)  
• Adjustment location : L007  
Method : Adjust L007 so that the output level at 1404kHz becomes maximum.

### < DECK SECTION >

10. Tape Speed Adjustment  
Settings : • Test tape : TTA-100  
• Test point : J251 (PHONES jack)  
• Adjustment location : SFR of deck motor  
Method : Play back the test tape and adjust SFR so that the frequency counter reads  $3000Hz \pm 30Hz$ .
11. Head Azimuth Adjustment  
Settings : • Test tape : TTA-320  
• Test point : J251 (PHONES jack)  
• Adjustment location : Azimuth adjustment screw  
Method : Play back the 8kHz signal of the test tape and adjust screw so that the output becomes maximum.

12. Bias frequency Adjustment  
L801.....85kHz±0.5kHz

### < CD SECTION >

13. FE Balance Adjustment  
Settings : • Test point : IC401 PIN58 (VR), IC401 PIN 20 (FE)  
• Adjustment location : SFR430  
Method : Playback the disc and adjust SFR430 so that the test point voltage becomes 0V.

## PRACTICAL SERVICE FIGURE

### < TUNER SECTION >

Sensitivity:  
(THD 3%) Less than 18dB (87.5MHz)  
Less than 18dB (98.0MHz)  
Less than 18dB (108.0MHz)

Signal to Noise Ratio:  
(Input 60dB) More than 66dB (at 98.0MHz)  
(EXCEPT U)  
More than 58dB (at 98.0MHz)  
(U)

Distortion:  
(Input 60dB) Less than 3% (at 98.0MHz)  
Intermediate frequency:  
Stereo separation: 10.7MHz  
More than 20dB

### < AM SECTION >

Sensitivity:  
(S/N 10dB) Less than 48dB (at 600kHz)  
Less than 46dB (at 1000kHz)  
Less than 44dB (at 1400kHz)  
Less than 3%

### < LW SECTION >

Sensitivity:  
(S/N 10dB) Less than 60dB (at 153kHz)  
Less than 56dB (at 198kHz)  
Less than 52dB (at 288kHz)  
Less than 3%

### < CASSETTE SECTION >

Tape speed:	3000Hz±60Hz
Wow & flutter:	Less than 0.3% (JIS RMS)
Take-up torque:	30-60g·cm (FWD)
FF torque:	55-140g·cm
Rew torque:	55-140g·cm
S/N ratio:	More than 35dB
Distortion:	Less than 3.0% (PB)
Noise (PB):	Less than 1mV (AC/DC, MIN)
Erasing Ratio (W/FILTER):	More than 45dB

## IC DESCRIPTION

### IC, LA9241ML

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Pin to which external pickup photo diode is connected. RF signal is created by adding with the FIN1 pin signal. FE signal is created by subtracting from the FIN1 pin signal.
2	FIN1	I	Pin to which external pickup photo diode is connected.
3	E	I	Pin to which external pickup photo diode is connected. TE signal is created by subtracting from the F pin signal.
4	F	I	Pin to which external pickup photo diode is connected.
5	TB	I	DC component of the TE signal is input.
6	TE-	I	Pin to which external resistor setting the TE signal gain is connected between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES “Track Error Sense” comparator input pin. TE signal is passed through a band-pass filter then input.
9	SCI	I	Shock detection signal input pin.
10	TH	I	Tracking gain time constant setting pin.
11	TA	O	TA amplifier output pin.
12	TD-	I	Pin to which external tracking phase compensation constants are connected between the TD and VR pins.
13	TD	I	Tracking phase compensation setting pin.
14	JP	I	Tracking jump signal (kick pulse) amplitude setting pin.
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD-	I	Pin to which external focusing phase compensation constants are connected between the FD and FA pins.
18	FA	I	Pin to which external focusing phase compensation constants are connected between the FD- and FA- pins.
19	FA-	I	Pin to which external focusing phase compensation constants are connected between the FA and FE pins.
20	FE	O	FE signal output pin.
21	FE-	I	Pin to which external FE signal gain setting resistor is connected between the FE pin.
22	AGND	—	Analog signal GND.
23	SP	O	Signal ended output of the CV+and CV- pin input signal.
24	SPI	I	Spindle amp input.
25	SPG	I	Pin to which external spindle gain setting resistor in 12 cm mode is connected.
26	SP-	I	Pin to which external spindle phase compensation constants are connected together with SPD pin.
27	SPD	O	Spindle control signal output pin.
28	SLEQ	I	Pin to which external sled phase compensation constants are connected.
29	SLD	O	Sled control signal output pin.
30, 31	SL-, SL+	I	Sled advance signal input pin from microprocessor.
32, 33	JP-, JP+	I	Tracking jump signal input pin from DSP.
34	TGL	I	Tracking gain control signal input from DSP. Low gain when TGL = H.
35	TOFF	I	Tracking off control signal input pin from DSP. Off when TOFF = H.

Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	“High Frequency Level” is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV-, CV+	I	CLV error signal input pin from DSP.
41	RFSM	O	RF output pin.
42	RFS-	I	RF gain setting and EFM signal 3T compensation constant setting pin together with RFSM pin.
43	SLC	O	“Slice Level Control” is the output pin which controls the RF signal data slice level by DSP.
44	SLI	I	Input pin which control the data slice level by the DSP.
45	DGND	—	Digital system GND.
46	FSC	O	Output pin to which external focus search smoothing capacitor is connected.
47	TBC	I	“Tracking Balance Control” EF balance variable range setting pin.
48	NC	—	No connection.
49	DEF	O	Disc defect detector output pin.
50	CLK	I	Reference clock input pin. 4.23 MHz of the DSP is input.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	“Detect RF” RF level detector output.
55	FSS	I	“Focus Search Select” focus search mode ( $\pm$ search/+ search) select pin.
56	VCC2	—	Servo system and digital system Vcc pin.
57	REFI	—	Pin to which external bypass capacitor for reference voltage is connected.
58	VR	O	Reference voltage output pin.
59	LF2	I	Disc defect detector time constant setting pin.
60	PH1	I	Pin to which external capacitor for RF signal peak holding is connected.
61	BH1	I	Pin to which external capacitor for RF signal bottom holding is connected.
62	LDD	O	APC circuit output pin.
63	LDS	I	APC circuit input pin.
64	VCC1	—	RF system Vcc pin.

## IC, LC78622ED

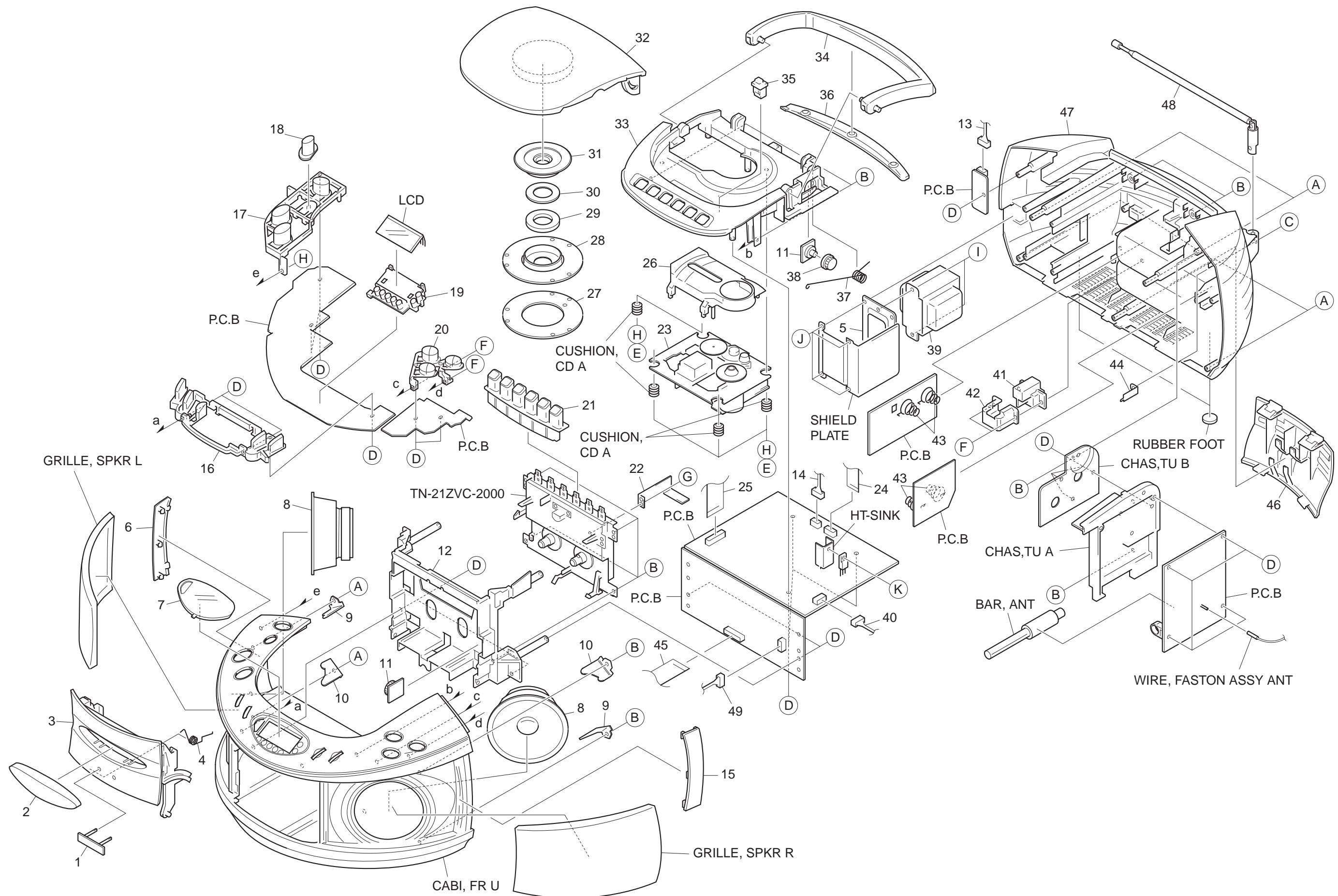
Pin No.	Pin Name	I/O	Description	
1	DEFI	I	Defect sense signal (DEF) input pin. (Connect to 0V when not used).	
2	TAI	I	For PLL.	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
3	PDO	O		Phase comparator output pin to control external VCO.
4	VVSS	—		GND pin for built-in VCO. Be sure to connect to 0V.
5	ISET	I		Pin to which external resistor adjusting the PDO output current.
6	VVDD	—		Power supply pin for built-in VCO.
7	FR	I		Pin for VCO frequency range adjustment.
8	VSS	—		Digital system GND. Be sure to connect to 0V.
9	EFMO	O	For slice level control.	EFM signal output pin.
10	EFMIN	I		EFM signal input pin.
11	T2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLK-	O	Disc motor control output. Three level output is possible using command.	
14	V/P	O	Rough servo or phase control automatic selection monitoring output pin. Rough servo at H. Phase servo at L.	
15	HFL	I	Track detect signal input pin. Schmidt input.	
16	TES	I	Tracking error signal input pin. Schmidt input.	
17	TOFF	O	Tracking OFF output pin.	
18	TGL	O	Tracking gain selection output pin. Gain boost at L.	
19, 20	JP+, JP-	O	Track jump control signal output pin. Three level output is possible using command.	
21	PCK	O	EFM data playback clock monitoring pin 4.3218 MHz when phase is locked in.	
22	FSEQ	O	Sync signal detection output pin. H when the sync signal which is detected from EFM signal and thesync signal which is internally generated agree.	
23	VDD	—	Digital system power supply pin.	
24	SL+	O	Moves the sled to outer circumference.	
25	SL-	O	Moves the sled to inner circumference.	
26	CONT3 (NC)	—	Not connected.	
27	PUIN	I	CD pickup inner switch detection.	
28	RW	O	Read, wright signal.	
29	EMPH	O	De-emphasis monitor output pin. De-emphasis disc is being played back at H.	
30	C2F	O	C2 flag output pin.	
31	DOUT	O	DIGITAL OUT output pin. (EIAJ format).	
32, 33	T3, T4	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
34	N.C.	—	Not used. Set the pin to open.	
35	MUTEL	O	L-channel 1-bit DAC.	L-channel mute output pin.
36	LVDD	—		L-channel power supply pin.
37	LCHO	O		L-channel output pin.
38	LVSS	—		L-channel GND. Be sure to connect to 0V.
39	RVSS	—	R-channel 1-bit DAC.	R-channel GND. Be sure to connect to 0V.
40	RCHO	O		R-channel output pin.
41	RVDD	—		R-channel power supply pin.
42	MUTER	O		R-channel mute output pin.

Pin No.	Pin Name	I/O	Description
43	XVDD	—	Crystal oscillator power supply pin.
44	XOUT	O	Pin to which external 16.9344 MHz crystal oscillator is connected.
45	XIN	I	
46	XVSS	—	Crystal oscillator GND pin. Be sure to connect to 0V.
47	SBSY	O	Subcode block sync signal output pin.
48	EFLG	O	C1, C2, single and dual correction monitoring pin.
49	PW	O	Subcode P, Q, R, S, T, U and W output pin.
50	SFSY	O	Subcode frame sync signal output pin. Falls down when subcode enters standby.
51	SBCK	I	Subcode read clock input pin. Schmidt input. (Be sure to connect to 0V when not in use.)
52	FSX	O	Pin outputting the 7.35 kHz sync signal which is generated by dividing frequency of crystal oscillator.
53	WRQ	O	Subcode Q output standby output pin.
54	RWC	I	Read/write control input pin. Schmidt input.
55	SQOUT	O	Subcode Q output pin.
56	COIN	I	Command input pin from microprocessor.
57	<u>CQCK</u>	I	Command input read clock or subcode read input clock from SQOUT pin
58	RES	I	LC78622 reset input pin. Set this pin to L once when the main power is turned on.
59	T11	O	Test signal output pin. Use this pin as open (normally L output).
60	16M	O	16.9344 MHz output pin.
61	4.2M	O	4.2336 MHz output pin.
62	T5	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
63	<u>CS</u>	I	Chip select signal input pin with built-in pull-down resistor. Be sure to connect to 0V while it is not controlling.
64	T1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

Pin No.	Pin Name	I/O	Description
1	O-RMC/CE	O	CD read/write control output and TU CE.
2	O-DATA	O	Data output to M62495FP.
3	O-CLK	O	Output CLK to tuner PLL.(Not connected)
4	—	—	Not Connected.
5	O-CLK SFT	O	Clock shift output of the microcomputer.
6	I-HOLD	I	Hold status detection.
7	RST	I	Microcomputer reset.
8	XT1 (IN)	I	Connected to 32.768KHZ crystal oscillator.
9	XT2 (OUT)	O	
10	VSS1	—	GND.
11	CF1 (IN)	I	Connected to 6MHZ Ceramic Filter.
12	CF2 (OUT)	O	
13	VDD1	—	Power supply for microcomputer (+5V).
14	I-ST IND	I	FM STEREO status input.
15	I-KEYO	I	KEY AD input.
16	I-CD SW	I	CD DOOR SW status detection input.
17	I-KEY1	I	KEY AD input.
18	I-MOTOR	I	DECK MECHA MOTOR status input.
19	I-REC	I	REC status input.
20	I-FM/AM	I	FM, AM status input. (Not connected)
21	I-TU DO	I	Data input from tuner PLL.(Not connected)
22	O-BASS LED	O	BASS LED ON/OFF control output.
23	O-QS LED	O	Q-Sound LED ON/OFF control output.
24	O-DUBB LED	O	LED control output used for high-speed dubbing.
25	O-INT	O	INT DIODE MATRIX detection output.(Not connected)
26	I-DRF	I	CD RF level detection input.
27	I-WRQ	I	CD sub-code Q standby input.
28	I-REMO	I	Remote control input.
29	S0/PA0	O	LCD segment output.
30	S1/PA1	O	LCD segment output.
31	S2/PA2	O	LCD segment output.
32	S3/PA3	O	LCD segment output.
33	S4/PA4	O	LCD segment output.
34	S5/PA5	O	LCD segment output.
35	S6/PA6	O	LCD segment output.
36	S7/PA7	O	LCD segment output.
37-40	S8~S11	O	
41	VDD3	—	Power supply for microcomputer (+5V).
42	VSS3	—	GND.
43, 44	S12, S13	O	LCD segment output.
45-50	S14- S19	O	LCD segment output.

Pin No.	Pin Name	I/O	Description
51-54	S20- S23	—	Not connected.
55	O-CD LED	O	LED ON/OFF control output for CD functions.
56	O-TU LED	O	LED ON/OFF control output for TU functions.
57	O-TA LED	O	LED ON/OFF control output for TAPE functions. (Not Connected)
58	O-ROCK LED	O	LED ON/OFF control output for ROCK.
59	O-POP LED	O	LED ON/OFF control output for POP.
60	O-JAZZ LED	O	LED ON/OFF control output for JAZZ.
61	—	—	Not connected.
62	I-CD TEST	—	Not connected.
63	I-TU TEST	—	Not connected.
64-66	COM0-COM2	O	LCD common output.
67	—	—	Not connected.
68	VSS2	—	GND.
69	VDD2	—	Power supply for microcomputer (+5V).
70	O-CD ON	O	CD PWR control output.
71	O-TU ON	O	TU PWR control output.
72	O-P.CONT	O	Power supply control output.
73	O-H.DUBB	O	Dubbing speed control output.
74	O-MUTE	O	Main mute output.
75	O-MO/ST	O	FM mono/stereo output.
76	O-BEAT CONT	O	BEAT switch over output.
77	O-QSOUND	O	Q-Sound ON/OFF output.
78	O-COIN	O	CD command output.
79	I-SQOUT	I	CD sub-code Q input.
80	O-CQCK	O	CLK for CD commands/sub-codes.

MECHANICAL EXPLODED VIEW 1/1



## MECHANICAL PARTS LIST 1/1

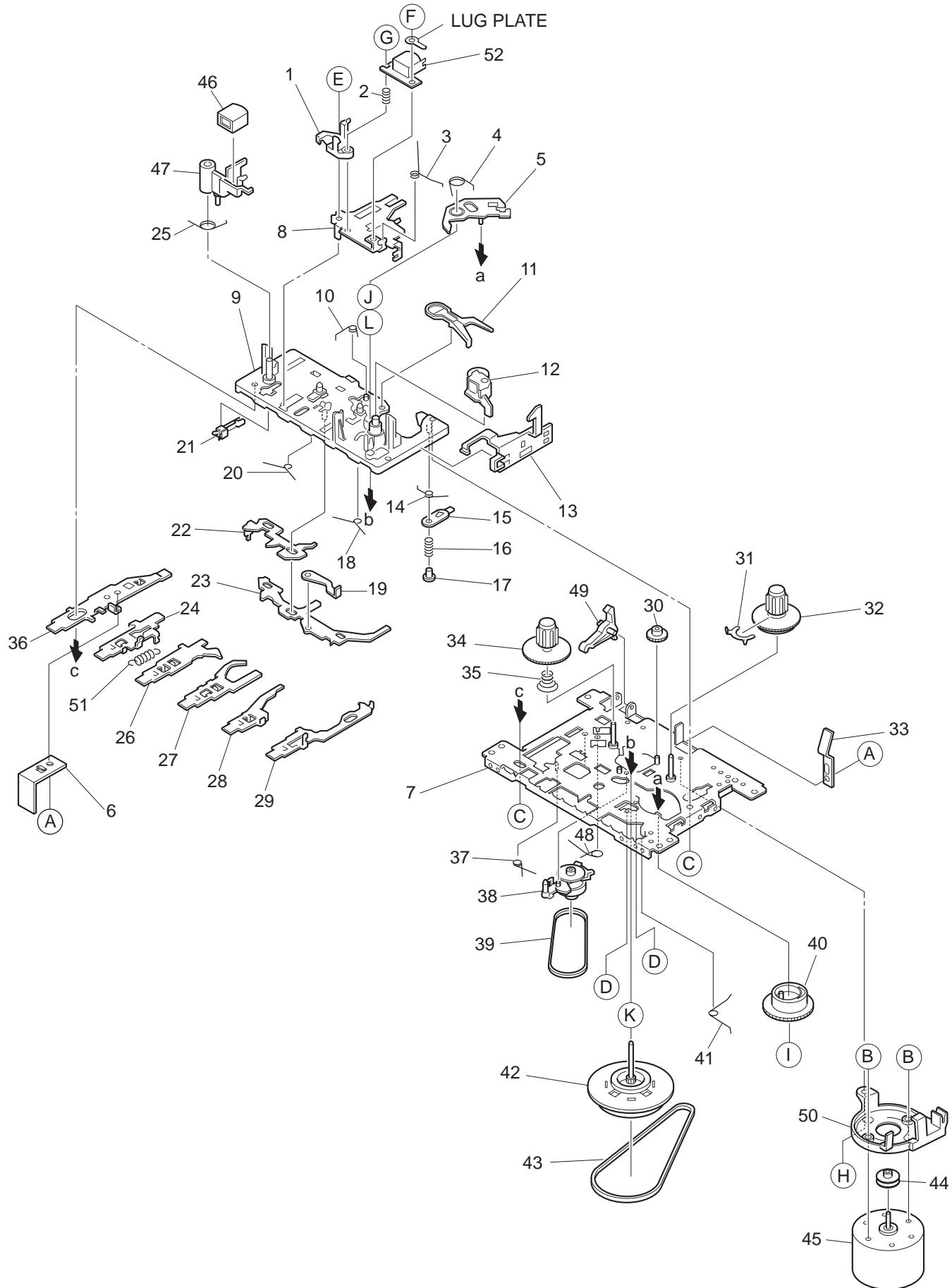
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
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REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-CL7-107-010		BADGE,AIWA SILVER	32	8A-CH8-037-010		BOX,CD (L)<53 U<L>
2	8A-CD8-007-010		WINDOW,CASS<EXCEPT 53 U<L>,52 U<W>>	32	8A-CH8-018-010		BOX,CD (W)<52 U<W>>
2	8A-CH8-040-010		WINDOW,CASS (L)<53 U<L>>	32	8A-CD8-027-010		BOX,CD EX<EXCEPT 53 U<L>,52 U<W>>
2	8A-CH8-021-010		WINDOW,CASS (W)<52 U<W>>	33	8A-CH8-038-010		CHAS,CD (L)<53 U<L>>
3	8A-CD8-006-010		BOX,CASS<EXCEPT 53 U<L>,52 U<W>>	33	8A-CH8-019-010		CHAS,CD (W)<52 U<W>>
3	8A-CH8-039-010		BOX,CASS (L)<53 U<L>>	33	8A-CD8-028-010		CHAS,CD EX<EXCEPT 53 U<L>,52 U<W>>
3	8A-CH8-020-010		BOX,CASS (W)<52 U<W>>	34	8A-CD8-008-010		HANDL,FR<EXCEPT 53 U<L>,52 U<W>>
4	8A-CD8-207-010		SPR-T,CASS	34	8A-CH8-041-010		HANDL,FR (L)<53 U<L>>
5	8A-CD8-209-010		HLDR,TRANS	34	8A-CH8-022-010		HANDL,FR (W)<52 U<W>>
6	8A-CD8-018-010		PANEL,FR L<EXCEPT 53 U<L>,52 U<W>>	35	87-036-389-010		SW,PUSH LOCK
6	8A-CH8-048-010		PANEL,FR L (L)<53 U<L>>	36	8A-CD8-009-010		HANDL,REAR<EXCEPT 53 U<L>,52 U<W>>
6	8A-CH8-029-010		PANEL,FR L (W)<52 U<W>>	36	8A-CH8-023-010		HANDL,REAR (W)<52 U<W>>
7	8A-CH8-014-010		WINDOW,LCD EX<51 K<S>,51 EZ<S>>	37	8A-CD8-208-010		SPR-T,CD
7	8A-CH8-003-010		WINDOW,LCD U<51 U<S>,53 U<L>,52 U<W>>	38	84-CD5-216-010		BRACKET
8	88-CD8-622-010		SPKR,F 77 70HMM 3W	39	8A-CD8-603-010		PT,E 2.5W<51 K<S>,51 EZ<S>>
9	8A-CD8-210-010		HLDR,SPKR A	39	8A-CD8-602-010		PT,U 2.5W<51 U<S>,53 U<L>,52 U<W>>
10	8A-CD8-211-010		HLDR,SPKR B	40	8A-CD9-630-010		CONN ASSY,4P RPH
11	84-CD5-215-010		GEAR	41	87-A60-178-010		JACK,AC E W/SW<51 K<S>,51 EZ<S>>
12	8A-CD8-021-010		CHAS,CASS<EXCEPT 53 U<L>,52 U<W>>	41	87-A60-177-010		JACK,AC U W/SW<51 U<S>,53 U<L>,52 U<W>>
12	8A-CH8-047-010		CHAS,CASS (L)<53 U<L>>	42	87-A90-086-010		COVER,AC-SOCKET
12	8A-CH8-031-010		CHAS,CASS (W)<52 U<W>>	43	88-CD8-209-010		SPR-C,BATT
13	8A-CD9-633-010		CONN ASSY,4P SP	44	8A-CD8-212-010		HLDR,ANT
14	8A-CD9-626-010		CONN ASSY,2P DOOR	45	8A-CD9-620-010		FF-CABLE, 16P FR-MAIN
15	8A-CD8-022-010		PANEL,FR R<EXCEPT 53 U<L>,52 U<W>>	46	8A-CD8-003-010		LID,BATT<EXCEPT 53 U<L>,52 U<W>>
15	8A-CH8-049-010		PANEL,FR R (L)<53 U<L>>	46	8A-CH8-036-010		LID,BATT (L)<53 U<L>>
15	8A-CH8-030-010		PANEL,FR R (W)<52 U<W>>	46	8A-CH8-017-010		LID,BATT (W)<52 U<W>>
16	8A-CH8-005-010		KEY,CONTROL CD<EXCEPT 53 U<L>,52 U<W>>	47	8A-CH8-002-010		CABI,REAR<EXCEPT 53 U<L>,52 U<W>>
16	8A-CH8-046-010		KEY,CONTROL CD (L)<53 U<L>>	47	8A-CH8-035-010		CABI,REAR (L)<53 U<L>>
16	8A-CH8-027-010		KEY,CONTROL CD (W)<52 U<W>>	47	8A-CH8-016-010		CABI,REAR U (W)<52 U<W>>
17	8A-CD8-014-010		KEY,VOL<EXCEPT 53 U<L>,52 U<W>>	48	8Z-CH4-640-010		ANT,ROD
17	8A-CH8-044-010		KEY,VOL (L)<53 U<L>>	49	8A-CD9-631-010		CONN ASSY,4P TP-ME
17	8A-CH8-025-010		KEY,VOL (W)<52 U<W>>	A	87-B10-242-010		UT2+3-30 W/O CR
18	8A-CD8-017-010		KEY,QSOUND	B	87-641-096-410		UT1+3-10 GLD
19	8A-CH8-201-010		HLDR,LCD	C	87-254-097-410		U+3-12 CR
20	8A-CH8-004-010		KEY,FUNC<EXCEPT 53 U<L>,52 U<W>>	D	87-741-095-410		UT2+3-8 GLD
20	8A-CH8-045-010		KEY, FUNC (L)<53 U<L>>	E	87-342-074-010		UT2+2.6-8
20	8A-CH8-026-010		KEY, FUNC (W)<52 U<W>>	F	87-353-076-210		VT2+2.6-12
21	8A-CH8-043-010		KEY,CASS (L)<53 U<L>>	G	87-571-032-410		VIT+2-3
21	8A-CH8-024-010		KEY,CASS (W)<52 U<W>>	H	87-WA5-253-010		W,3.3-10-0.8
21	8A-CD8-011-010		KEY,CASS SET<EXCEPT 53 U<L>,52 U<W>>	I	87-751-094-410		VT2+3-6 W10SLOT
22	8A-CD8-213-010		SPR-P,REC	J	87-661-097-410		TAPPING SCREW, VFT1+3-12
23	M8-ZZK-E90-070		DA11T3C	k	87-067-566-010		TAPPING SCREW, VFTT+3-6
24	8A-CD9-622-010		FF-CABLE, 8P CD-FR				
25	8A-CD9-621-010		FF-CABLE, 16P CD-RF				
26	8Z-CDB-169-010		PANEL,CD SANYO				
27	88-CD9-211-210		RING,CHUCK				
28	8Z-CDB-170-010		BASE,CHUCK				
29	87-036-368-010		MAGNET				
30	84-CT5-209-010		PLATE,MAGNET				
31	8Z-CH4-225-110		HLDR,CHUCK A(S)				

## COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

# TAPE MECHANISM EXPLODED VIEW 1/1

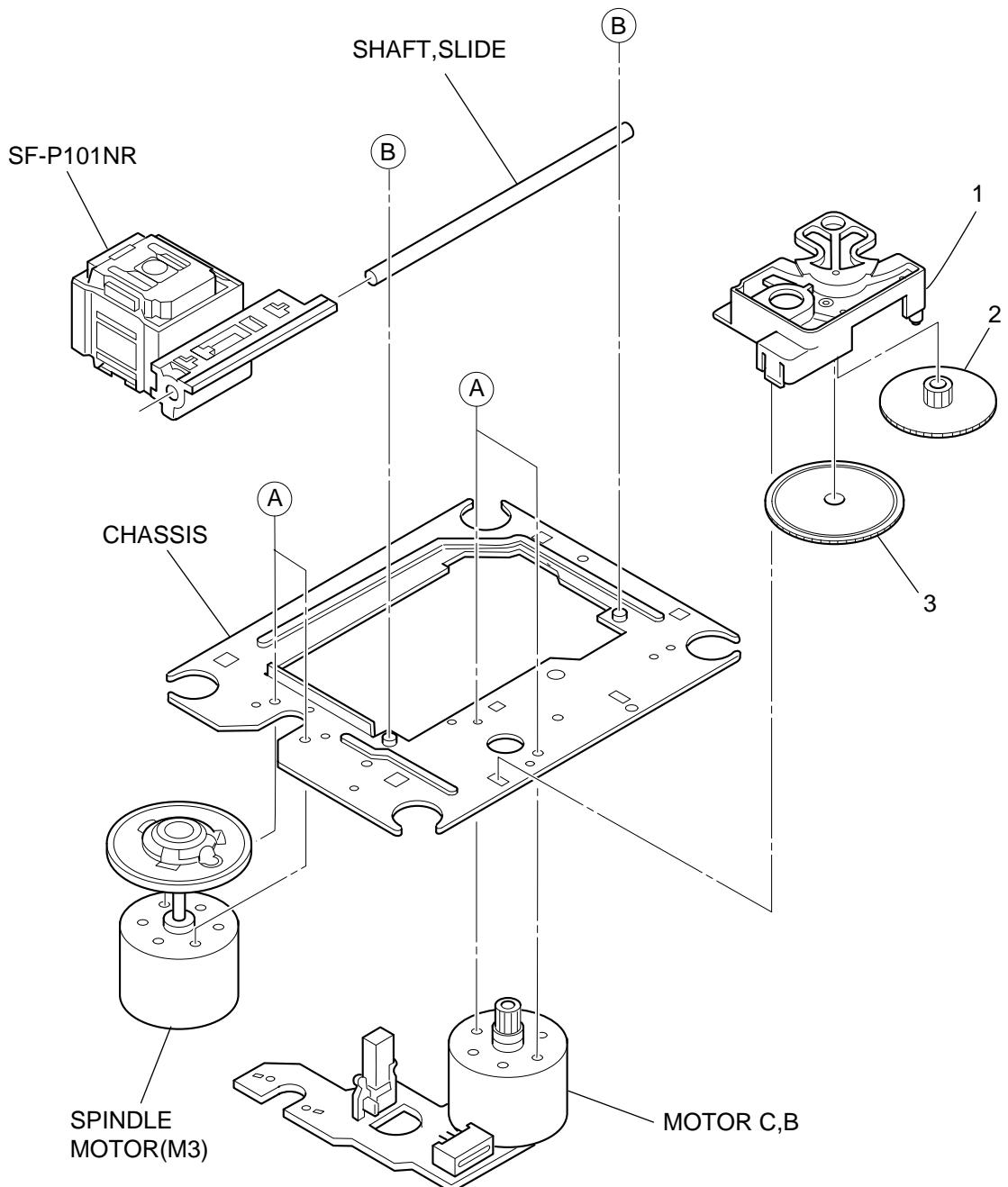


## TAPE MECHANISM PARTS LIST 1/1

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If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF.NO	PART NO.	KANRI NO.	DESCRIPTION			
1	S1-921-030-4A0		HEAD BASE	36	S1-921-140-030	REC BUTTON LEVER
2	S1-821-030-070		AZIMUTH SPRING	37	S1-921-140-170	P.S.LEVER SPRING
3	S1-921-030-090		PANEL P SPRING	38	S1-921-073-040	RF CLUTCH ASSY
4	S1-921-260-050		GEAR PLATE SPRING	39	S1-921-070-030	RF BELT
5	S1-921-265-020		GEAR PLATE ASSY	40	S1-921-260-020	CAM GEAR
6	S1-510-020-020		REC SPRING PLATE	41	S1-921-140-160	E ACTUATOR SPRING
7	S1-921-015-010		CHASSIS ASSY	42	S1-921-093-210	FLYWHEEL ASSY
8	S1-921-030-110		HEAD PANEL	43	S1-921-090-380	MAIN BELT
9	S1-921-143-160		BASE ASSY	44	S1-921-120-590	MOTOR PULLEY
10	S1-921-141-8A0		M CONTROL SPRING	45	S6-002-030-220	MOTOR EG530AD-2B
11	S1-921-260-4A0		SENSING LEVER	46	S6-209-100-100	E HEAD PH-K380-MS1
12	S1-921-043-100		PINCH ROLLER ARM ASSY	47	S1-921-030-050	MG ARM
13	S1-921-130-010		EJECT SLIDE LEVER	48	S1-921-140-210	REC BUTTON LEVER SPRING
14	S1-921-141-3A0		P CONTROL SPRING	49	S1-821-100-690	RECORD SAFETY LEVER
15	S1-921-140-550		PAUSE LEVER(E)	50	S1-821-128-9A0	MOTOR BRACKET
16	S1-921-140-120		PAUSE LEVER SPRING	51	S1-821-010-500	PLAY BUTTON LEVER SPRING
17	S1-921-140-110		PAUSE STOPPER	52	S6-201-011-110	HEAD,RP7442ES-0951
18	S1-921-140-150		BUTTON LEVER SPRING(B)	A	S9-P04-200-310	C TAPPING SCREW 2-3
19	S1-821-011-590		E KICK LEVER	B	S1-921-120-020	MOTOR COLLER SCREW
20	S1-921-141-070		BUTTON LEVER SPRING(A)	C	S9-B10-200-510	P TAPPING BIND SCREW M2-5
21	S6-401-011-490		LEAF SW MSW-1541T	D	S9-C07-204-510	SCREW,TAPPING(CAMERA)M2-4.5
22	S1-921-140-090		SWITCH ACTUATOR	E	S9-P01-200-610	SCREW,M2-6
23	S1-921-140-080		PUSH BUTTON ACTUATOR	F	S9-B01-200-310	(+)BIND SCREW M2-3
24	S1-921-140-190		PLAY BUTTON LEVER	G	S9-F08-200-710	AZIMUTH SCREW M2-7
25	S1-921-030-100		MG ARM SPRING	H	S1-921-120-030	MB SCREW
26	S1-921-140-040		REW BUTTON LEVER	I	S9-W02-300-100	P WASHER CUT 1.2-3.8-0.3
27	S1-921-140-050		FF,BUTTON REVER	J	S9-W02-500-100	P WASHER CUT 1.45-3.8-0.5
28	S1-921-140-060		STOP BUTTON LEVER	K	S9-W01-400-100	P WASHER 2-3.5-0.4
29	S1-921-140-600		PAUSE BUTTON LEVER	L	S9-W01-130-200	P WASHER 2.1-4-0.13
30	S1-821-100-700		FF GEAR			
31	S1-921-050-060		SENSER			
32	S1-921-053-100		TAKE UP REEL ASSY			
33	S1-829-100-010		PACK SPRING			
34	S1-921-050-150		S REEL HUB			
35	S1-921-050-220		BACK TENSION SPRING			

# CD MECHANISM EXPLODED VIEW 1/1



## CD MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S2-121-A28-400		COVER GEAR
2	S2-511-A21-000		GEAR MIDDLE
3	S2-511-A21-100		GEAR,DRIVE
A	S1-PN2-03R-0SE		SCR PAN PCS 2-3
B	87-261-073-410		SCR S-TPG FLT 2.6-6
ALL	M8-ZZK-E90-070		DA11T3C

## ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CH8-906-010		IB,EZ(9L)B<51 EZ<S>>
1	8A-CH8-905-010		IB,K(E)B<51 K<S>>
1	8A-CH8-903-010		IB,U(ESF)B<51 U<S>,53 U<L>,52 U<W>>
△	2 87-A80-036-010		AC CORD SET ASSY,E W/FLTR VOL<51 EZ<S>>
△	2 87-A80-034-010		AC CORD SET ASSY,K W/F MAY-BG<51 K<S>>
△	2 87-A80-109-010		AC CORD, HK7281 BLK U<51 U<S>,53 U<L>,52 U<W>>



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